

## TANGLE WHITE PAPER

### ABSTRACT

Tangle is an application for prediction markets that stores outcomes of events by utilizing the Neblio blockchain. In order to reap the benefits of the application a user must possess TGL tokens exclusively, that is predictions are made and finalized using TGL tokens. Tangle proposes a bi-structural design in which one application is holistically centralized but utilizes the blockchain to ensure results and outcomes are fair - that can't be changed once settled and the second incarnation utilizes a full decentralized structure for users who are adept with blockchain technology and cryptocurrencies.

Holders of TGL tokens will be able to create prediction markets, take a position and be rewarded for the correct outcome. In the case of disputes, a settlement window\* will be open for which votes can be made in order to determine the outcome. The result is a prediction market where trust requirements, friction, and fees will be as low as competitive market forces can drive them.

Currently, prediction markets have been technically difficult to operate with the average user requiring technical assistance to create and deploy them. In other instances, prediction markets allow for only a select few to create markets leading to a much more centralized system from a philosophical standpoint leaving few with rights to create markets and reap excessive rewards with minimum to zero penalties when rules are not observed.

Tangle's aim is to empower the average user to participate in a prediction market whether it means through creation, buying in (positioning) or disputing. Hereinafter, Tangle's team is referred to as Tangle Economy to provide a clear distinction between itself and the platform.

## THE PLAN

Tangle Economy will mimic the business model and implementation of Binance (Cryptocurrency Exchange). This means that the project will be implemented as a web and mobile application that utilizes TGL tokens created on the Neblio blockchain for utility and be the exclusive currency of the system. Users with the requisite amount of TGL (20,089) will have the ability to exchange them for a market creator account which they can use to create prediction markets for other users to participate. Users who hold enough TGL to participate in a market, an amount determined by the market creator, shall be able to do so. A disputant account may also be acquired for 20,089 TGL.

The Breakdown is as follows:

1. Market Creator Account: 20,089 TGL (Also sets fees for prediction market)
2. Disputation Account: 20,089 TGL
3. Standard Users: Varied TGL for participation based on Market Creator's discretion.

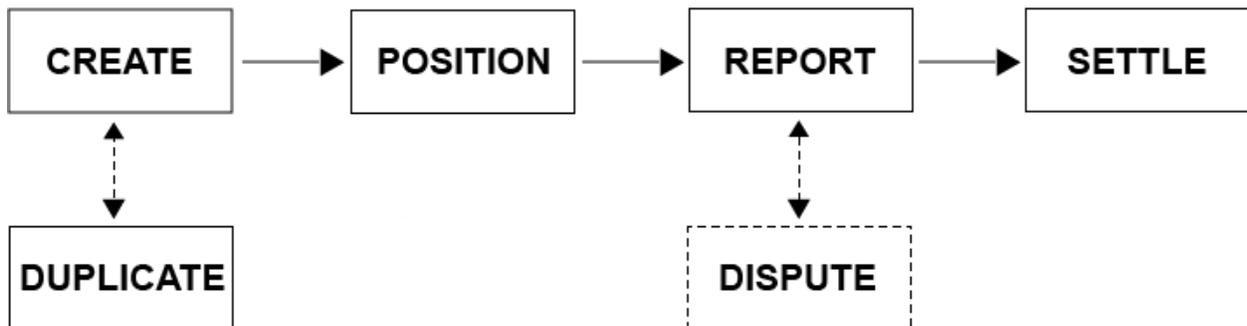
The above is an emphasis on Tangle in PHASE 1 utilizing Neblio's blockchain specifically for the finalization of outcomes and to record disputes. This will be the basis of PHASE 1. The focus of PHASE 2 will be to implement a fully decentralized version of PHASE 1. This approach is taken to increase traction and drive more usage to the platform by the basic user who is not adept with the usage of blockchain or cryptocurrencies. In other words, the abstractness that is usually emphasized through authentication and participation will remain hidden, they will focus on the user experience aspect as if there were no cryptocurrencies involved and view TGL tokens as 'traditional virtual money'.

The funds raised will be used for the project development and growth. Though this project will be made a reality via a token sale, it is largely understood that Tangle Economy observes all legal requirements for listing. Fees are not always attributed to listings but legal opinions are required for which funds will be allocated. Tangle Economy can guarantee one exchange with favorable distribution among currencies listed.

## OPERATION

Tangle prediction markets consist of four static phases and one dynamic phase : create, position, report, settle and the dynamic phase of dispute. Market creators are the only ones capable of executing the create phase that is they can create prediction markets on any event. The market is immediately active once it has been created and participants can take a position for their prediction: YES or NO. This is known as the position phase. After the event on which the market is based has occurred, the outcome of the event is validated through an API call. Once the outcome is determined, buyers can collect their payouts in TGL.

## Phases of Tangle



## CREATE

Tangle allows any user with 20,089 TGL to create prediction markets for other users to participate. The market creator will also choose a resolution source that reporters should use to determine the outcome. The resolution source must be a specific source, such as “CoinMarketCap.com” for the price of BTC, ESPN for Tennis Results, or the address of a particular API endpoint. The creator earnings is fixed at 10%. The market creator has the ability to set the entry fee and all markets are binary options (YES or NO).

A user participates in each market by paying the TGL fee set by the Market Creator and taking a position of either YES or NO. Once a transaction is confirmed, your position is active in the market. Participants may also invite other users to take part in a particular prediction market using a designated referral code which allows them to scalp 5% from the invited user should they take a winning position.

*The creator must also commit to a prediction. If the creator is unsuccessful during the outcome. The 10% fee is forfeited and awarded to the opposing buyers that won.*

## POSITION

Users participate in a market by taking a position. The position can be 1 of 2 options: Yes or No. Once a position is taken, a user only has to wait for the result to be confirmed in order to collect their payout.

For example, consider the following market: Will Barcelona win the 2019 UEFA Champions' League? YES or NO. The market was created by Demi who said YES and sets an entry fee of 1000 TGL so now the total amount of funds on that prediction is 1000 TGL. Tom agrees with Demi and takes the same outcome for 1000 TGL. Cindy on the other hand says NO and enters the market with 1000. The total funds up for grabs is now 3000 TGL. The prediction is executed and Barcelona did not win and as a result, Cindy collects a payout of 2700 TGL (10% deducted as fees for Tangle Economy). Participants in a market may also earn by referring a particular prediction to their peers which results in a 5% commission from if they choose a winning outcome.

## REPORT

Once a market event occurs, the result must be finalized for settlement to occur. Results are finalized by Tangle's engine which provides a report validating the outcome. Any user with 20,089 TGL may acquire a disputant account that they can use to oppose a result.

Once a dispute is launched, a 120 hour window remains open to settle the matter. If the dispute is successful, a financial incentive of 5% is paid out. Where results of a sporting event are usually final, the results of a political event may change and as such the need for a disputant is critical.

## SETTLE

Tangle's platform deducts fees once markets are settled, that is the results are final. Tangle takes 10% and the creator is rewarded 10% if they predict on a winning outcome plus their share of the additional winnings. In the case of a dispute that was successful, disputants are awarded 5%. At any given time, winning participants may collect between 80% and 90% of the winning outcome. The 10% fee collected by Tangle remains fixed.

## DUPLICATES

Markets can often be duplicated for example: two markets created to predict the price of BTC on December 31, 2019 with the same properties (min, max, match). In the case of duplicate markets, the most recently created market shall be removed.

## NOTEWORTHY EXCEPTIONS

Objective events define the usage of Tangle. If reporters believe that a market is not suitable for resolution by the platform { for example, because it is ambiguous, subjective, or the outcome is not known by the event end date } they should report the market as Invalid. If a market resolves as Invalid then the market is voided.

It is possible to imagine markets where some reporters are certain that the outcome is Yes or No. For example, in 2006, Trade-Sports allowed its users to speculate on whether North Korea would release a ballistic missile that would land outside of its airspace before the end of July 2006. On July 5, 2006, North Korea successfully launched a ballistic missile that landed outside of its airspace, and the event was widely reported by the world media and confirmed by many U.S. government sources. However, U.S. Department of Defense had not confirmed the event, as was required by TradeSports' contract. TradeSports concluded that the contract's conditions had not been met.

## USE CASE EXAMPLE

Will the Golden State Warriors Win the NBA Championship? NO

A market is created by Michelle asking “Will the Golden State Warriors Win the NBA Championship?” YES/NO . She sets an entry fee of 1000 TGL and Michelle as the market creator commits to the answer of NO. Tom and Cindy say YES and place a total of 2000 TGL (1000 each). Florence and 2 of her friends agree with the market creator - Michelle and commit to the answer of NO and wagers a total of 3000 TGL (1000 each). The total TGL in the given prediction market is now 6000.

The event occurs and Golden State Warriors did not win the NBA Championship (losing the series in 4 games). Florence and her mates secure 1200 TGL each, a 20% increase on their initial position while the market creator Michelle secures 1800 TGL, 1200 TGL for predicting the correct outcome with the other NO buyers and 600 additional TGL as the incentive for creating the marketing which translates to the 10% fee. Tangle Economy secured 600 TGL as well from the market regardless of the outcome.

Will the Golden State Warriors Win the NBA Championship? YES

A market is created by Michelle asking “Will the Golden State Warriors Win the NBA Championship?” YES/NO . She sets an entry fee of 1000 TGL and Michelle as the market creator commits to the answer of NO. Tom and Cindy say YES and place a total of 2000 TGL (1000 each). Florence and 2 of her friends agree with the market creator - Michelle and commit to the answer of NO and wagers a total of 3000 TGL (1000 each). The total TGL in the given prediction market is now 6000.

The event occurs and Golden State Warriors win the NBA Championship (winning the series in 7 games). Tom and Cindy secure 2700 TGL each, a 170% increase on their initial position. The market creator forfeited the 10% fees by predicting the wrong outcome which goes to both Tom and Cindy.

Tangle Economy secured 600 TGL as well from the market regardless of the outcome.

## THE SUPPLY LINE

Tangle Economy has created a total of 12,500,000 TGL tokens on the Neblio Blockchain. 10% of this supply is designated to the team for expenditure relating to the platform's progress in the form of development, recruitment and marketing.

The soft cap is set at \$250k. Why this amount? The initial development has a partially centralized system that reduces expenses and increases exposure to the general population thereby allowing a greater likelihood for adoption. Centralized Exchanges vs Decentralized Exchanges are a great example of the results governing adoption. This is why we have modelled our initial roll-out in a similar method to Binance that has only released a DEX recently. The goal here is to provide TGL with utility while courting as many users as possible to employ a gradual learning curve.

Below is a breakdown of the token economics:

### Token

{Total Supply: 12,500,000}

{Circulating Supply: 10,250,000}

### Earnings

Market Creator: 10% [20,089 TGL]

~Disputant: 5% [20,089 TGL]

### Sale

Private Sale: 1,000,000 (0.05) - 6 month lock-up period\*

Presale: 2,000,000 (0.10)

Public Sale: 8,125,000 (0.12)

Bounty: 125,000

Team: 1,250,000

## THE SUPPLY LINE

### Funds Usage

Application development - 35%

Chrome extension Neblio and NTP-1 Wallet - 15%

Exchange Listing - 15%

Litigation - 2.5%

Marketing - 22.5%

Event attendance - 10%

### TIMELINE:

Token Sale - April 2019 through August 2019

Alpha Release and Closed Testing - July 2019 [Simulation for invited participants]

Exchange Listing, Beta Release and Selective Testing - September 2019

Product Release and Testing - October 2019

Techcrunch San Francisco Disrupt - October 2019

Neblio (NTP-1) Chrome Extension Wallet - November 2019

Mobile App for Android and iOS - December 2019

White Label Prediction Market - March 2020

*~Fund Usage will be dynamically adjusted based on the amount raised during token sale.*

## CLOSING REMARKS

Tangle Economy is deploying the Tangle Application with the aim of creating more entertainment value through ease of use and all inclusivity of prediction markets while merging two industries together that are suitable for this endeavour: leveraging and cryptocurrencies. Tangle has chosen Neblio for its metadata characteristics and fast transaction time in an effort to record outcomes: finalized and disputed. This provides the basis for Tangle to transition from an application that partially utilizes the blockchain to one that will rely on a fully decentralized version in the future.

Tangle Economy's approach is based solely on gaining traction. The more users, the more successful the application. It is on this basis that we forge ahead with our timeline for the application. It should be recognized that the timeline has the alpha release before the end of the token sale. Access will be granted to participants in the token sale up to that period. Tangle Economy looks forward to a future of great success. Let's go now and dominate the prediction market! Will Tangle be the #1 platform for prediction markets in the cryptocurrency space by the end of 2020? YES or NO.