ALETHEO

Aletheo(from Greek - God of Truth) is a framework for monetizing text-generation AI with secondary utilities. It allows to transform money into the purest form of power. As it was said in the Bible: “In the beginning was The Word”. The ticker “LET” attempts to highlight the significance of first Bible verse as primary utility.

Decentralized word-of-mouth marketing service

What ad trailers and internet personalities attempt to do is not just to sell, but to start a *discussion* to increase awareness, to pump up the popularity of the product. Word-of-mouth marketing, proof-of-discussion, is what promotes the product today. Celebrities and ads are just a third-party and it is certainly possible to eliminate this third-party and pay directly for discussion and mentions instead.

The primary utility of the token is being a sovereign currency for exchange between employers and posters. Employers either setup and fund campaigns. Posters commit to these campaigns by discussing certain posts or anything eligible(matching keyword) for paid discussion. By default, posters are allowed to express any opinion on every topic, and, depending on the resource, posters by default have the right to completely derail the discussion and talk about anything. Posters will get paid for unrelated discussion as long as it for example bumps the thread, or adds another comment to discussion making it look more heated and popular. LET default marketing paradigm(employers can choose their own specific terms though) promotes critical thinking. It might however depend on the resource and a forum could simply ban/remove unrelated posts. Posts need to be witnessed by oracles, so a poster has to ensure that his post satisfies the rules of a website, chat, resource.

There are two types of campaigns, funded and stake campaigns. Funded campaigns can be funded with LET tokens or any approved tokens. Stake campaigns are campaigns created by stakers as a part of Aletheo default campaign and are funded by a corresponding share of treasury emission for default campaign. Basically if a staker creates a campaign that is not related to Aletheo, this staker takes away a share of default campaign emission for his own needs. Funded campaigns are only required as a familiar, simple way of ordering services, rather than studying Aletheo in-depth.

Campaign settings available to employers are very flexible to meet every need:

1.Ppp – pay-per-post. Defines how much posters get paid for a post, and in which token it is denominated.

2.Array of key strings. A key string can be a word or a phrase, a sentence, a text of any length. If employer sets more than one key string, then these key strings become options to make the posting more natural.

3.Mandatory key string can be left blank. Requires to use mandatory key string in every post regardless whether the post is related to key string discussion or not.

4.Array of target urls. The campaign works only on the websites with these urls or platforms(like online videogames). If none set – it means everywhere Aletheo can reach.

5.minStaked. Minimum requirement of locked LET tokens for a poster to have to join the campaign. It can potentially help with moderation or eliminate the need of moderation completely, depending on the chosen route of marketing campaign.

6.nonEditable, a boolean. Can be set to true in it’s inception or at any point in time. If a campaign is non-editable, it can attract funding from other employers, since keywords will stay the same until the funds run out, basically allows to make it last longer potentially and decentralize it.

7.noFiring, a boolean. If set to true, posters can't be fired at all, so that posters will more likely join the campaign.

8.onlyManualApproval, a boolean. If set to true, posters can't join the campaign without employer' approval, when this is set to true, then minStaked is ignored completely, even posters with 0 LET tokens locked can join as long as approved.

9.keyStringPerWords. As an example, in a job which requires 1 key string per 1000 words, if a poster writes 4 posts 250 words each, he has to mention the key string in those 4 posts at least once, and he will get paid for those 4 posts. If this is at 0(default), then the poster is being paid for every post.

10.minPostLength. Minimum amount of symbols in the post to be eligible for a reward.

11.modsPay. Needed if the employer does not feel confident and wants to moderate the campaign, but has no time for that. In purely decentralized setup, LET mods are not obliged to follow the rules he wants to enforce, however they are assumed to follow the rules he wants to enforce, since mods profits depend on Aletheo profits and success as a whole and because the governance can fire them prematurely.

12.rulesLink. A link to a post explaining the rules for posting in detail and ban rules. In the spirit of default LET campaign can be left blank.

13.expirationDate. By default it's 1 month from creation. If the budget of the campaign is not exhausted, the remaining budget is being refunded to the employer.

14.minCreativity. Minimum poster' sense of humor/creativity which is evaluated by decentralized moderation.

15.postRate. Determines how often a poster can post eligible for payout posts in this particular campaign. Default is ~1 minute, if poster posts more often he is not punished, just not getting paid for more.

16.maxPosters. A limit to make small budgets viable. If not set, might be computed automatically, considering that posters have to have sufficient profit.

17.startTime-endTime. Time of day in UTC. By default 0 to 0, which means 24 hours per day. Specifies time when the campaign is active and posters are paid.

18.An array of campaign languages. Left blank if any language. If not left blank, then only posters who can join are those who stated their language. A poster can't alter his language, he can only choose to set one or not to set at all. From the start, posters of different languages will have same pay-per-post for default campaigns.

General philosophy and technical principles

-Politicians are as naive in the face of innovation as we are. All their experience means very little when an innovative technology turns upside down everything what they knew about.

-Everything is inefficient. The world' scientific progress while advancing everyday is actually close to stagnation in comparison to how fast it could be.

-The probability of a new innovative technology appearing increases exponentially with each passing year. The probability of a new existential threat appearing increases exponentially with each passing year. Humanity either evolves or goes extinct.

-Richest governments spend billions on medical research paying full salaries in their inefficient bloated jurisdictions.

-The world has so much more brain power than ever, and the most of this brain power is unable to innovate.

-Historically most smart people were failing to achieve power, because they were always busy with concepts nobody understands.

-The internet is the watch. The internet saves more lives than all governments' laws combined. As long as we keep open borders for the internet, devastating conventional warfare or even World War 3 won't happen regardless of Power Vacuum. Or, if it will happen, there will be significantly less victims.

-Modern humans are potentially immortal. We don't need a spit in the face in a form of elders' care. We can use our retirement money for cryopreservation.

-Humanity will always remain an existential threat to itself. In the future many absolutely unimaginable technologies will be researched to prevent extinction.

-Dying people just stop wanting to live, because their systems are failing, that's it. That's how we die.

-Eternally healthy humans will strive for new experience and knowledge for eternity.

-LET doesn't care who you are, what's your age, gender, ethnicity or skin color.

-Today, cryptocurrency is potentially mutable as is. There are ways to change this. Aletheo technology can shape public opinion of cryptocurrency to ensure free cryptocurrency agenda survival in post-cbdc world.

-Some of the most expensive commercials ever made cost around $30 millions. This amount of money in LET could produce an absolute overkill Aletheo campaign. A campaign of this scale could be used to promote brand commercials on Youtube, build community around official accounts and set given keywords trending for a prolonged period of time on different social networks and potentially create unprecedented so far public interest.

Architecture

The core of Aletheo – oracles and DAO. Oracles are supposed to be an anonymous decentralized network, but since oracle' code might require megabytes of code, making it open-source too soon wouldn't be strategic, so it's not going to happen soon. Current live stage relies on centralized black box oracle.

Pseudo-anonymous oracle network

Pseudo-, because it relies on some facts of identity. Oracles witness posters' activity on different platforms like Twitter, Discord, Telegram, etc, by fetching data from these resources. This data is being processed entirely on the oracle side and the results are being pushed to the aggregator smart contract as rewards numbers and to Aletheo website as posters' posts and statistics.

It is possible to make anonymous and pseudo-anonymous oracles to deliver true results. Oracles shouldn't know what role they are performing in a given iteration of publishing results. There have to be two roles: witnesses and supervisors. Chosen supervisors have to be a small uneven amount of all oracles. Supervisors' results are considered to be true, and witnesses results have to match it. If supervisors' results don't match, another attempt of choosing supervisors occurs, until supervisors results match, while published results stay, no republishing occurs during that. In case of lies, a part of oracle' stake is being slashed. To increase the probability of that the several oracles are definitely not one person, we can use these facts about an anonymous wallet:

1.Balance. Allow anonymous oracles only with considerably high balance. In addition, higher LET balances have the least incentive to lie and ruin posters' trust.

2.Transaction history. Democracy Earth Foundation is building tech which attempts to measure unique humanness. We could use their framework or build our own which evaluates the differences in views in different DAO choices, and not just membership of different DAOs.

3.Many other proofs of unique human exist to date, which could easily match our purposes.

LET specifically also can use these important variables:

3.Language. Language communities could be required to elect oracles.

4.Poster history activity and uniqueness, if only posters are to run oracles.

The governance must always review and approve oracle results or reject those results, so a case of fake rewards is less likely but still possible. An independent observer software is required for this. Both posters and oracles have emissions for rewards, so rewards are not available in full as approved, so even if results are fake and approved, malicious oracles and posters will require a significant amount of time to claim those fake rewards, so such act will lead to most investors exiting before these rewards are claimed, so it can't possibly be profitable unless the aim is to damage Aletheo DAO reputation. This system most probably eliminates lying about massive rewards, but small lies can still work. This is still a pending issue *(the issue is that in current proposed design, anonymous oracles have some probability of success in collective small lies)* to resolve elegantly. Autistic roll-ups could

be required for this – a form of an even lighter optimistic roll-up, mostly event based.

Of other possible malicious threats, anonymous oracles can censor some addresses collectively. If a poster is censored, then he moves to a different oracle cluster, so that censoring oracles lose money. Using anonymous oracles in this design could be an utopistic idea, so an easy more conservative solution is still on the table: kyced oracles.

Smart contracts overview

Aletheo smart contracts are minimalist:
1. LET token contract is a modified ERC-20 with small changes like allowances made booleans to reduce gas cost of transfer and imposes 10% tax on every transaction to all registered in the contract pools, whether it's a sell or liquidity addition. The tax is required for sustainability of Aletheo treasury.

2.Trust-minimized proxy or simply trustless proxy. https://github.com/ethereum/EIPs/blob/master/EIPS/eip-3561.md

All Aletheo contracts will be behind this proxy. It's an altered upgradeability proxy EIP-1967 with some features that allow to remove trust to developers and/or governance. New logic implementation is not being set as soon as transaction with new logic was mined, instead it is being stored in NEXT_LOGIC_SLOT up to NEXT_LOGIC_BLOCK_SLOT, or for a month or so. The period allows participants to identify if the deployer or the governance is malicious and therefore to exit safely. Next logic can be canceled in case of a bug discovered or upgraded to after month passes. For convenience, it is impossible to cancel next logic and immediately propose another next logic. Proxy admin can also prolong lock(), if for example a situation arises in which there are no plans to upgrade a particular contract for a time being, so that it keeps participants peace of mind for that period. This variable also can be set to infinity-1 to completely seal the code. Until removeTrust() is called, the proxy acts like typical EIP-1967, once it's called, it forever acts as EIP-3561.

3. Liquidity Manager contract. Aletheo liquidity will be managed in order to avoid loss of LET token value in market downtrends, in other words all liquidity from for example ETH pool will be moved to USDC pool. The contract is supposed to be managed by the DAO or a trader. This contract has opened an opportunity to implement probably the most efficient way to reward liquidity staking, without distributing LET tokens to liquidity providers, which makes the system much more sustainable overall.

4. Treasury contract. Treasury contract balance will be distributed to LET token(not liquidity tokens) stakers, oracles, posters, airdrop recipients and the team in a trust-minimized way. Dao can also use the treasury quite freely to assign grants for whatever it would see necessary. Dao has no incentive to assign massive rewards maliciously, since all rewards and airdrops have a vesting period, so again, over time, investors will exit sooner than malicious reward will be fully claimed.
5. Job Market contract. A contract in which marketing campaigns will be registered by employers and non-default campaign rewards will be held.

6. Governance contract. This contract will be in charge of Aletheo after all contracts will be locked forever, or, there is a chance that it might manage upgradeable proxies as long as at that stage Aletheo will be "too big to fail". Managing treasury requires absolutely next level DAO' purity of intentions, *fundamentally pure governance*. A governance that is incapable to act maliciously towards the project as a whole. Of all proposed by Szabo options, we should choose "ruthlessly minimized".

Multistage governance can allow this, first stage of voting is voting by "humanness" of posters(see chapter humanness), if it passes then it goes to voting by stake, and when that proposal passes then it goes to final voting of special stakers, whos stake will be locked for a greatly longer time frames, like two years(with inability to vote in last 4-6 months unless lock is prolonged by two more years). This way the DAO will be long term thinking regardless of most issues and almost entirely incapable of being malicious towards itself. For example, a grant must not be transferred in one big transaction, it should be vested slowly, and the DAO should be able to revoke it. Another part is participation, will be solved by incentivizing voting, a vote must have a reward.

If DAO is given power over upgradeable contracts, it can completely change the system, everything. Several options are available.

7. Staking contract. Staking contract for posters and voters to lock their tokens as commitment stake for a period shorter than 1 month(shorter than trust-minimized proxy upgrade period). Staking produces some LET yield as of now and is supposed to eventually entirely depend on fees from campaigns.

8. Oracle Aggregator contract. The aggregator must use Chainlink verifiable random numbers or an alternative to determine supervisor oracles and slash lies.

9. Trust-minimized cross-chain bridge. Commit-reveal scheme disallows oracles to alter transactions. First what a user(or an oracle network, an oracle, or a some sort of a bot automating the process for a user) needs to do is to announceHash(), Hash has to be generated by the off-chain by the user maybe through a web ui and has to correspond with:

keccak256(abi.encodePacked(userAddress,arg1,arg2,arg3,arg4,anyDisposableKey))

The user keeps all arguments and disposable key to himself, until anonymous trustless oracle network relays the hash to the other chain, he then must verify if the hash is indeed his, and if it is, then he sends the actual transaction with all arguments and used disposable key. The contract on the other chain will only accept address, arguments and a key that matches previously posted hash. If the contract indeed receives correct arguments – oracles are rewarded. This bridge allows not just to cross() or simply relay tokens value, but it also allows to callAcross() - to relay data which enables trustless cross-chain contracts communication and therefore cross-chain governance.

LET wallet

LET wallet is a browser extension. Aletheo has started on 4chan and this wallet' sole purpose was to send posters data to the oracle, since 4chan users are not identified by a username or anything like bio. Posters, which would like to post on imageboards or any other supported resource which does not have usernames, will be required to use this browser extension to track their activity and send the data either to oracles or send it to some optimistic roll-up as transactions.

Commit-reveal scheme with a delay could almost entirely eliminate front-running. Another, probably better way or an addition could be: if two identical datas where posted from two posters, and that data is confirmed to exist on the imageboard, then a poster with higher stake will get the reward, since front-running will be predominantly attempted by 0 stake posters. Posters with locked stake can be banned from the system, so they are unlikely to go through such a small risk.

Currently the wallet sends the data directly to the oracle, as an option for future development, it can send a transaction to an optimistic roll-up with every post automatically.

Mirrors

Mirrors are smart contract instances of Aletheo deployed on different chains and layers, mainly required to have a legitimate reason to monetize more communities centered around different chains. At the time of writing there are two active mirrors: on avalanche and on fantom blockchains. With trust-minimized bridge, cross-chain governance will be supported.

LET chain

Development of the chain has low priority, far on the roadmap. Let chain might be a fork of Oxen. Oxen by default is an XMR POS fork, therefore LET chain will have privacy of data by default, with some differences, like an option to make some blocks public, these blocks will postpone all private transactions to the next first following private block.

It's smart contracts will be written in HolyC. HolyC for next-generation God Protocol' Holy Chain with Holy Contracts. Arguments invalid.
Posters can be allowed to run nodes with virtual stake which can eventually be filled with their salaries to make the chain decentralized faster. Virtual stake nodes after accumulating at least some balance could help validate 0 value transactions.

Secondary utilities

Secondary utility is an utility that might not be able to generate enough value on it's own for a functioning protocol.
An example could be charity or/and grants from treasury. Charity protocol on it's own would likely collapse, but charity as a secondary utility might

create a positive feedback loop.
Another one could be valuable enough on it's own, but still is a logical addition to post-to-earn: meme market. Meme contests of any budget, for any given topic, including Aletheo itself.
And another one that expands post-to-earn, and can pretty much be sufficient on it's own, but makes absolute sense to be a part of Aletheo: monetizing observable activity everywhere, even in online games. Dota and Lol ladders can easily be monetized, a player would need to include given keyword in his username, and every ranked match would be paid.
With the last one especially, Aletheo concept becomes slightly broader: not post-to-earn, but more like *monetize your online presence*.

There are countless already existing examples in monetization of conventional web out there on how to expand Aletheo's "monetize your online presence".

Decentralized moderation

There is a very specific need in online word-of-mouth marketing: the need to determine whether a poster is a bot or not, 'humanness'. Several solutions to identify a unique human behind an address do not really work so well here, since a human can solve whatever puzzles or equations once to prove he is a human, and then most of the time run some gpt-3 bot. A different, subjective metric is required, determined in decentralized way. Since 'humanness' is a limiting toxic term, Aletheo must stop using it and replace with a broader one: creativity or *shill power*. It's very useful for any employer to look at posters' ratings in creativity, sense of humor, persuasiveness, and overall likelihood of how often a given poster posts as a human and not an AI.

Shill power metric is supposed to include all of that, and will be a part of posters' rewards formula: the more shill power, the higher is the pay.

Voting by stake will determine shill power of different posters.
Currently, in beta-test, shill power is disabled, and posters which do nothing but spam are being removed from the system in a centralized way, which forces them to unstake and pay 5% tax.

Tokenomics

Note: as stated above, mirrors are required to create a legitimate reason for posters to access different communities around different chains, so numbers shown below will be valid for every major Aletheo mirror(ETH, BSC for example). Currently live are AVAX and FTM mirrors, which are exceptions: have much less supply(40k and 60k).

Starting supply: 100000 LET tokens.

Total supply: 300000 LET tokens. Total supply was loosely defined and most likely the treasury will afford to burn at least a half of the tokens.

Emission: maximum emission is approximately 10000-20000 LET tokens each year. It depends on if all treasury emissions are being used, Aletheo team however wants to keep it never higher than at 15k LET yearly even if higher emission is possible.
Programmatic decrease of emission like in Bitcoin is considered outdated and was good only to increase chances of proving the concept of Bitcoin. Emission decrease will depend on governance decisions, more like in Ethereum. Emission will probably decrease dramatically with LET token gaining more value to support more posters.

On launch, the most tokens are locked in treasury.
Treasury will support:

1. Default Aletheo promotion campaigns. Posters will receive salary for default campaigns from treasury. Whether it's based on main or secondary utility.

2. Airdrops. Aletheo airdrops will be vested, except for the current ones. These airdrops have passive emission of 0% and unlock gradually on top of posters' rewards, effectively making poster with an airdrop earn twice more as long as there are still tokens for his address to airdrop. Current airdrops include locked balances of AVAX snowflake to Aletheo migration, "Founders" of a failed Ethereum and Fantom launches.

3. Oracles. Will be used for late-stage Aletheo

5. Team. Depending on willingness and contribution.

7. Anything else that governance will be interested in supporting, as long as functionality for grants and

financial support for a particular idea is possible to fulfill in trust minimized way.

8. Bug bounty and audits.

Commitment stake. Posters, to increase their rewards, lock LET tokens in staking contact for at least 25 days(a period, shorter than trust-minimized proxy fastest upgrade). Posters can increase their pay to as much as 50x more(this modifier is subject to change as protocol userbase matures), by locking a maximum of 1000 LET tokens. The more skin in the game, the more Aletheo gives back.

Sell tax. Fixed 10% tax from every transaction to any of registered LET token pools goes back to treasury to ensure Aletheo is sustainable.

Liquidity management. Aletheo liquidity is locked in the contract, but this contract can swap that liquidity to a pair with a different token. In a downtrend it can swap to a stable coin, and in an uptrend to a potentially one of the best performing projects on a given chain. The list of tokens must be trusted by the community(no new ponzi rugs) and shouldn't be easily edited. There are two options to provide liquidity to Aletheo, both of which do not require any timelocking at all:
1. The usual constant pairing with a given pool through uniswap or a fork. Allows to sometimes greatly decrease impermanent loss, because the pool of liquidity manager is not a permanent variable. An example could be: in an uptrend, while liquidity contract keeps it's liquidity paired with main token of a given chain, a liquidity provider could provide more liquidity to DAI pool and this way accumulate DAI, and the other way around.
2. Staking liquidity so it will be swapped by liquidity manager together with liquidity this contract owns to preserve value while still collecting trading fees.

Beta-test

While the contracts are live on AVAX and FTM, Aletheo is ready to go to bigger chains, and posters already earn mainnet LET tokens, it's still in beta-test. Beta-test is Aletheo in a much different state from the design proposed in this draft:
1. it uses centralized black-box oracle in trust-minimized way, in a way that even if the oracle gets hacked, it won't be able to steal any funds, and even if the deployer of smart contracts is malicious, emission limits won't allow the deployer to steal any sufficient amount before community notices something is wrong.

2. no decentralized moderation and no shill power('humanness'), only stake.

3.Functionality of Aletheo browser extension is restricted during beta-test to certain imageboards.

4.Aletheo browser extension only automatically signs a message with post data and sends to the centralized oracle, it does not send any transactions to any layers 0 or 1.

5.Trust-minimized proxies are still not locked(still act as EIP-1967 proxies).

6.No governance contract.

7.No job market. So Aletheo posters can only earn from Aletheo campaign.

8.No meme market.

Legal

Some countries forbid paid endorsement without disclosure. Depending on the language and platform, sometimes posters will have to include a disclaimer in their bio. Otherwise FUD is certainly legal everywhere.

Another possible problem is that massive platforms enjoy having ads profits for themselves, attempting for peaceful co-existence Aletheo should endorse posters who use paid services of different platforms, 4chan pass buyers must earn more, Discord nitro buyers must earn more, so are Telegram premium users and so on.

Risks

You acknowledge and agree that there are numerous risks associated with purchasing LET Token, holding LET Token, and using LET Token for participation in the LET Network. In the worst scenario, this could lead to the loss of all or part of the LET Token which had been purchased. IF YOU DECIDE TO PURCHASE LET Token, YOU EXPRESSLY ACKNOWLEDGE, ACCEPT AND ASSUME THE FOLLOWING RISKS:

Uncertain Regulations and Enforcement Actions : The regulatory status of LET Token and distributed ledger technology is unclear or unsettled in many jurisdictions. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its

applications, including LET Token and/or the LET Network. Regulatory actions could negatively impact LET Token and/or the LET Network in various ways.

Inadequate disclosure of information : As at the date hereof, the LET Network is still under development and its design concepts, consensus mechanisms, algorithms, codes, and other technical details and parameters may be constantly and frequently updated and changed. Although this white paper contains the most current information relating to the LET Network, it is not absolutely complete and may still be adjusted and updated by the LET Network Development team from time to time. The LET Development team has no ability and obligation to keep holders of LET Token informed of every detail (including development progress and expected milestones) regarding the project to develop the LET Network, hence insufficient information disclosure is inevitable and reasonable.

Competitors : Various types of decentralised applications are emerging at a rapid rate, and the industry is increasingly competitive. It is possible that alternative networks could be established that utilise the same or similar code and protocol underlying LET Token and/or the LET Network and attempt to re-create similar facilities. The LET Network may be required to compete with these alternative networks, which could negatively impact LET Token and/or the LET Network.

Failure to develop : There is the risk that the development of the LET Network will not be executed or implemented as planned, for a variety of reasons, including without limitation the event of a decline in the prices of any digital asset, virtual currency or LET Token, unforeseen technical difficulties, and shortage of development funds for activities.

Security weaknesses : Hackers or other malicious groups or organisations may attempt to interfere with LET Token and/or the LET Network in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, there is a risk that a third party or a member of LET development team may intentionally or unintentionally introduce weaknesses into the core infrastructure of LET Token and/or the LET Network, which could negatively affect LET Token and/or the LET Network. Further, the future of cryptography and security innovations are highly unpredictable and advances in cryptography, or technical advances (including without limitation development of quantum computing), could present unknown risks to LET Token and/or the LET Network by rendering ineffective the cryptographic consensus mechanism that underpins that blockchain protocol.

Other risks : In addition, the potential risks briefly mentioned above are not exhaustive and there are many other risks associated with your purchase, holding and use of LET Token, including those that the risks that LET development team cannot anticipate. Such risks may further materialise as unanticipated variations or combinations of the aforementioned risks. You should conduct full due diligence on Aletheo, as well as understand the overall framework, mission and vision for the LET Network prior to purchasing LET Token.