Kalpa DAO

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01/13/2022

Abstract. A Multichain Decentralized Autonomous Organization (MDAO) presents a novel mechanism to raise and allocate capital, attract and retain talent, launch projects across protocols strategically where they are most needed, build on existing community network effects and rapidly go to market without the traditional constraints of a centralized investment group or the liquidity of a single blockchain network. Kalpa DAO is a new breed of Multichain Decentralized Autonomous Organization (MDAO) founded to facilitate the growth, interoperability and strategic collaboration across blockchain ecosystems.

1. Introduction

The limitations of legacy venture capital are no longer aligned with the evolving needs and speed at which modern blockchain ecosystems move. Many foundations with large funds also have difficulty deploying capital, as they lack the staff and experience for properly vetting and analyzing projects at scale. Many independent validators who don't have a large stake are seldom able to break into substantial paid positions unless they give the majority of their rewards away for votes, then end up with little to reinvest back into network support. As a result, *those who add the most value within many blockchain networks are often the least compensated for their contributions*. The proliferation of generation three and four blockchains has further fragmented and stifled community growth across many of these newly emerging protocols and the availability of capable talent is increasingly scarce. This new cycle of generation three and generation four protocols present unique possibilities in shaping web3 and the emerging Internet of Blockchains, but who will emerge as the winners will be predicated on real adoption. This uncertainty combined with misaligned incentives across many blockchain networks presents a long term risk in opportunity cost for investors and builders alike depending on the chain, level of exposure and sunk cost. Rather than choosing a few winners based on strong fundamentals and hype, what is needed is a more pragmatic, diversified strategy as well as a process of shared collective intelligence, resources and talent across many of the best up and coming gen three and gen four blockchain networks. The ability to collect deeper insights into all aspects of an emerging protocol through a consortium of validators - paired with a highly vetted geographically distributed talent pool of senior leadership - could be very powerful when combined with a Multichain Decentralized Autonomous Organizational structure. Designated custodians with adequate authority to fund the most talented teams in their geographic region and placing them in the ecosystems where they will be the most successful would seem to be far more sustainable and strategic than the current model.

2. Philosophy

The core philosophy of the Kalpa DAO centers around cycles. We see cycles of nature in the form of seasons, cycles of markets, cycles of life, solar systems, galaxies and even cycles of creation inherent in the birth and eventual death of our own universe. Understanding these cycles and seeking harmony with them, learning from them and continuing along the path of exploring human potential within them is the journey that binds us. We leverage blockchain as well as other emerging technologies as a vehicle to continually actualize this potential by creating opportunity, stability and abundance for those participating in our Multichain Decentralized Autonomous Organization. We believe a community with adequate resources is sovereign and more capable of improving the world around them. Our goal is to provide the capital, mentorship, processes, network and talent pool to rapidly activate Kalpa member projects, continually building on each other's success.

3. Governance

Blockchain technology facilitates new forms of online governance but also presents new challenges. While DAOs are easy to manage when they are small and agents are aligned under a set of common goals and principles, as more agents join a DAO, *the scale problem* [1] (Field et al) can inhibit consensus and the subsequent access to capital related to those actions. There are many working examples of DAOs who've exploried the decentralized governance problem space [2] (Faqir-Rhazoui et al). These experiments have provided insights on many of the pitfalls DAOs commonly face along their cycle of growth. This research tells us that starting with a centralized and flat governance structure, then scaling up incrementally in equilibrium with demand, is preferable over unnecessary complexity and bureaucracy. Furthermore, choosing a blockchain platform that provides the necessary feature set that is required to launch and operate a Multichain Decentralized Autonomous Organization as well as related cross chain assets is mission critical.

4. Proposals

Governance decisions will be split into two distinct tiers of actions based on agent account thresholds. Agent account voting actions are static and provide a means to *approve, disapprove or obstain* on various *proposals, validators and funding* in the form of a signed transaction on the blockchain. **The two tiers of governance proposals and actions can be defined as:**

- **System proposals** (voting on core code updates and related smart contracts and infrastructure)

- **Community proposals** (voting to approve proposals submitted by community members for funding)

5. Consensus Mechanism

Kalpa DAO leverages a combination of *Proof of Vote* (PoV) [3], *Proof of Personhoo*d (PoP) [4] using personal identifiers and existing DiD standards [5], and a *Holographic Voting* [6] mechanism design to reach consensus on proposals and related governance decisions at scale.

5. Voting Thresholds

A proposal must collect at least ⌊Nc2⌋+1 *approve* actions in a signed transaction from active member agents in order to be approved.

6. Time Thresholds

Each proposal type has a predefined expiration date. For example, all votes on community proposals must be submitted within 30 days of the submission date. More complex system proposals that take longer to reach consensus expire in 90 days.

7. Time Upgrades

Agents must pass a *Proof of Personhood* threshold to vote on system proposals in an effort to mitigate sybil attacks [7] as well as other system vulnerabilities presented by Pareto distribution [8]. Kalpa members can still vote on community proposals, but will not not be able to vote on proposals for system upgrades.

8. Membership

Kalpa DAO membership requires access to a limited edition generative art avatar NFT that has special permissions in the Kalpa ecosystem. Members who hold the NFT can access our network of mentors, vote on community and system proposals, get early access to drops and dApps across multiple chains, as well as private invite only educational events and retreats hosted by members. Membership is capped at 7,000, but can be raised via system upgrade proposals. The first 200 members will require a referral from 3 or more existing members, descending from the founders of the project. A 200 member threshold is required in order to launch the generative art NFT avatars, which will be capped at 7,000 total supply per membership capacity. Sales from the membership NFTs will be collected in the Kalpa DAO treasury and distributed to members through LP token staking rewards.

9. Multi-chain Accounts & Liquidity

LP tokens spawn multi-chain addresses/accounts in the networks we support and allow you to store, send & receive numerous coins/tokens on different blockchains in one single address, with only one single passphrase to control assets across multiple blockchain. In this way, member accounts who stake become their own multi-chain liquidity providers. In addition, Kalpa DAO treasury stakes for the best yield across all networks and pays dividends relevant to total stake back to its members who hold LP tokens.

10. Token Design

Kalpa DAO operates based on a two token system design. **The two types of tokens can be defined as:**

- **Membership NFT** (limited supply generative avatar non-fungible membership tokens with access to governance rights and full membership benefits)

- **LP Tokens** (tokens only accessible to agents who are membership NFT owners that unlock access to staking rewards based on total accumulated Kalpa DAO dividends)

Agents must own a membership NFT in order to hold and access LP tokens. LP tokens are earned based on actions and various rewards structures only accessible to membership NFT account holders. The purpose of this design decision is to provide the unique combination of a verifiable onchain asset to authorize ongoing membership benefits and early access to Kalpa DAO projects combined with a cross chain liquidity pool and perpetual staking rewards.

a. Supply

7,500 **Membership NFTs** will be auctioned to reflect total member capacity. **LP tokens** will be pegged 1000:1 with a total supply of 7,500,000. Only 3,500,000 LP tokens will be available for sale and will require consensus through 2/3rds+1 of active members to unlock. The first community proposal will act to issue the LP tokens locked in the Kalpa DAO smart contract and release them to the DAO treasury. The other 4,000,000 LP tokens will be given out automatically as a staking reward over a period of 4 years to those who meet higher trust and engagement thresholds within the DAO. Membership NFTs can only hold 1000 LP tokens per agent account.

b. Incentives

Members who vote consistently on proposals that get high approval rates, pass all PoP thresholds and stake liquidity receive a percentage of the DAOs Total Locked Value. The first 100 members can earn LP token bonuses

c. Reward Distribution

30% of total LP token dividends are paid out daily to the Kalpa DAO treasury multichain wallet and 70% is paid out to LP token holders.

11. dApps

Decentralized applications that result in funding from the Kalpa DAO give a percentage of their dapps token distribution to the DAO in exchange for funding and / or staking for network resources for their dApp to onboard new users.

12. Validators

Kalpa DAO validators play a key role in creating cross chain liquidity, as 20% of their staking rewards across all networks are paid back to the Kalpa DAO treasury multi-chain wallets in return for voting stake. Validators who are part of the Kalpa DAO ecosystem embody the principles of decentralization and act as stewards on the networks they operate in, always looking for opportunities to help launch and advise new dApps and public good projects with talent from the various blockchain ecosystems they operate in.

13. Decentralization

Once the adequate technology, infrastructure, community and capital are in place to scale up, a more distributed governance model will be deployed to empower all DAO participants in larger governance decisions. These four phases - *Inception, Birth, Growth and Disruption* - will be initiated by relevant funding milestones and completion of the related tasks in each phase.

I. Inception

This first phase is centered around bootstrapping the organization and executing on the administrative duties, compliance, community relations, staffing, SOPs and consolidating core Kalpa DAO participants in order to stand up the organization. This phase will manage and release funds that are mapped to Objective and Key Results in tranches from a simple MSIG 2/3rds majority signed by the three designated founding custodians who represent the economic regions that the DAO will be deployed in.

II. Birth

In this second phase, the organization should be fully functional from an operational and compliance perspective. The underlying technology and governance structure will begin development based on the goal of establishing a Multichain Decentralized Autonomous Organization with cross chain digital asset capabilities. Designated Kalpa validators who participate will begin launching on select protocols and providing a 10-20% reward fee structure back to Kalpa DOA wallet addresses (per network) in return for voting stake. Fees will be paid back to the DAO and distributed among governance token holders.

III. Growth

In the third phase, the Kalpa DAO smart contracts and all related functionality developed in the first two phases is released and community proposals and voting begin. The full power of the Kalpa community is unleashed.

IV. Disruption

To stay in tune with the ebbs and flows of technology cycles, system improvements learned from shortcomings in the initial design are addressed and refined. Proposals will attach system upgrades with certificates of audit and testing before voting can begin.

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