

"Moments" with "Proof of Experience": A decentralized consensus protocol for a social blockchain for photo sharing

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Abstract

Moments is a decentralized moment (photo, short video) sharing app that is designed to eliminate user targeted ad-based revenue model, to ensure a relationship between creators and viewers with transparent platform moderation and to encourage content curation and publication by rewarding users with Moment coin. MomentCoin(MCC) is the unit currency in the Moment app that is generated in a periodic interval by the miner nodes in the decentralized blockChain named "MomentsChain". MomentsChain uses Proof of Experience via Engagement (POEE) to ensure miner nodes are invested in the chain through their engagement, contribution, social experiences and approved coins. Miner nodes in the MomentsChain network are responsible to produce blocks containing social transactions with real social contents and MomentCoin(MCC) is rewarded to the block producing node for the computational power contributed to the chain security. Miners are elected through a combined process of the users' approval, direct delegation of coins and engagement based reputation and experience scores. Moment follows similar reward model and token based economy used in the new blockchain based social content platforms. Moment engineers has recognized that the new reward based content economy lead to selfish activities, bot-driven fake engagements in the platforms that hurt real engagement and growth of quality contents and users. Therefore, Moment envisions to distinguish itself by also creating rigorous non-monetary quality metrics to rank contents and moment users and influencers to deincentivize unhealthy activities. Moment hopes to encourage users to engage in a meaningful way and also promises to provide a pathway for unwealthy creators to earn reputation and Momentcoin as rewards by contributing their valuable contents, comments a.k.a attention and social experience. Moments will be very restrictive to create unique human user base with the cost of an initial compromise of identity and privacy, an organic growth of original contents, a psychologically healthy usage of online social platform by creating rules to reduce fake, spammy, bot activities. In its core principal, moments want quality human engagement to provide better moment sharing experience. Moment is trying to solve the problem of low quality content, low effort for quick gains, lack of real engagement in a token based content economy by enforcing rules that increase engagements and human communication.

1 Introduction

Social networks enable users to post contents in the form of texts, images and videos and create a platform where users engage, interact and communicate with each other. Users join and stay active on a social network primarily for the social experience they enjoy. A social platform like facebook, instagram is called centralized because they store the published content on centralized servers and have full control over the access and sharing of user uploaded contents. Users typically give up the ownership of the contents and solely rely on the platform's service or provision throughout the lifetime of the content they originally created. In the worst case, contents can be forever deleted by the platform without the permission of the original content creator. We have seen the rise of unwanted censorship, violation of freedom of speech, freedom of expression, threat of channel removal or revenue reduction via aggressive banning, content suppression based on non-transparent socio-political bias of the CEOs, content moderation teams, online editorial boards from these centralized social networks. These big data platforms collect data from users by providing user experience through their frontend but keep users in the dark how they use users' data to create algorithms to target users. In the end, the promised social experience of users are harmed. On the other hand, the majority of users can never really monetize their contents even when they

are giving up their original content, personal preference data everyday. Because of the ad based revenue model, centralized social networks are bound to primarily please and serve the advertisers and keeping the interest of its own users second. Social network companies use their own users as the product by devising algorithm to attract attention through psychological manipulation. Therefore, we envision to create a new kind of social network where the power is in the hand of network node leaders, content creators and curators and contributors. A decentralized social network can be powered by decentralized storage alternatives, peer-to-peer file sharing system and self-hosting solutions and can reduce the burden of content hosting for the platform and therefore eliminates the need for advertisers as the funding mechanism to run the platform.

2 A brief History behind Social Blockchain

Bitcoin has proven that a decentralized network of nodes over the internet can maintain a trusted registry of transaction history and can transfer monetary value without the help of traditional banking network. Ethereum and other successor cryptocurrencies have shown that complex financial contracts can also be implemented on the blockchain without the requirement of trusted third party financial organizations. Eventually we have seen the rise of the decentralized finance (DeFi) tokens, decentralized lending protocols, blockchain based credit cards (blockfi), decentralized exchanges (uniswap, sushiswap etc.). Steemit and Steem chain have followed the blockchain revolution by introducing social blockchain where social content viewership and user engagement data are stored as transactions in the block. Steem blockchain was created with three basic principals - a) content contribution should receive content ownership b) contribution of scarce time and attention are as valuable as cash contribution (sweat equity principle) c) community should serve its own members rather than serve outside entities and financial interest. Steemit has seen great success since 2016 until it's decentralization has been threatened by the acquisition of a centralized entity named Steemit Inc. As a result, an independent fork of the Steem blockchain named Hive was born. Hive blog has since seen its ecosystem grow rapidly. Various dapps like dtube (decentralized video), Leo Finance, ecency etc. have been developed on top of Hive blockchain. Dtube has definitely been one of the most promising dapp on Hive ecosystem as it promised a decentralized alternative to video platforms such as Youtube, Vimeo etc. Dtube later decided to create its own chain named Avalon with native currency named DTC. Avalon followed a simple Voting Power (VP) based DTC coin generation compared to the three assets on Hive/Steem blockchain: 1. Steem/Hive 2. Steem Power(SP)/Hive Power(HP) 3. Steem dollar(SBD)/Hive Dollar(HBD). Steem/Hive restricts users by forcing them to commit Steem/Hive to a thirteen week vesting schedule. This vesting mechanism was introduced to ensure users don't quickly dump their earned coin and stay engaged in the platform. However, Avalon blockchain on dtube has avoided this restriction to provide user flexibility. Both Hive and Avalon face various challenges in terms of quality curation and proper evaluation of users' subjective contribution through their blogs and video contents. Moments is an attempt to fill the gap by creating a decentralized photo, moments sharing mobile app as an alternative to centralized platforms like Instagram and Tiktok. Moments blockchain will employ a modified version of social economy by initially forking dtube's Avalon blockchain. Unlike Avalon, MomentsChain will create a metric that will purely reflect content quality and user reputation by separating monetary reward and non-monetary appraisal, user satisfaction.

This table below shows some decentralized social media alternative to the centralized platforms.

Centralized platform	Decentralized Alternative
Facebook	Diaspora, MeWe
Youtube	LBRY, D.Tube, PeerTube, Bittube, Ecency
Reddit	Aether
Instagram	Karma
WhatsApp	Signal

3 What goals Moments want to accomplish?

- **Transparency on the working of the algorithm via open-source code.** This will mean anyone with programming knowledge can check how the feeds are generated, how the token economy is implemented and what changes are being employed through pull requests and merging by the core developers based on the suggestions from the community.
- **Fully decentralized governance and democratic decision making.** No central authority to solely decide on the protocol parameters, dictate the rules.
- **No advertisement and fair reward system for user contribution.** Protocol will have mechanism to determine users' subjective contribution to the platform. Disrupting ad based revenue model and create direct relationship between creators and viewers. Reduce centralized censorship, transparency via community rule based content moderation
- **Non-allowance of non-human bot activities.** Moderation techniques will be employed to punish bot activities, abusive voting that hurt the platform.
- **Decentralized file storage and potentially user-siloed data using IPFS or similar p2p technologies.** Content platform cost reduction and promotion of decentralized peer to peer content storage solution with IPFS, BTFS, Sia chain protocol.

We use social media primarily because we like social engagements. Our modern life can often turn into a boring activity streams that do not make us feel good and often infact make us feel subjugated. One may feel burdened with the regular routine obligations one have in his or her job. One may want to find new hobbies to pursue, new location to travel, new friends to hang out with, new fashion style to incorporate, new suggestions to read books, to listen music, to buy products. Typically, before online social media existed, a person would seek recommendations from his small friend circles in real life, meet new people in coffeeshops or libraries or malls and potentially expand their friend circles. With the advent of internet and digital connection, Facebook, Instagram and similar social sites have successfully created a new paradigm over the last 30 years where an individual user with a social account can now connect with another user anywhere in the world via internet regardless of their geographic location. Therefore, new kind of online relationship, friendship, social engamgenets can be formed over the internet. However, this ability to connect quickly and communicate with an internet stranger also gave birth to new problems as it is not easy to trust someone in an online relationship without physically meeting and bonding with someone or without knowing detailed information about an online entity. We can look at Amazon as a platform for selling online goods where they try to solve the trust factor of a product with product review systems. Even in that case, we see fake reviews created by parties with vested interest to mislead people for monetary gains. On online social networks like facebook, instagram, the site shows the connectedness, followership, prior content postings and engagements of a new friend, online acquaintance to help understand an individual and his or her intention. There are websites like meetup, facebook groups, eventbrite which were created to actually make people reliably meet based on common interest too. But it is not very uncommon to hear how fraudulent activities by fake accounts happen everyday. Regular online users are often targeted by scammers who try to steal identity, money and destroy the trust by creating frustration. Online social media can also be used by powerful entitites, extremist groups, authoritarian governments, criminal groups to recruit naive people, spread misinformation for their bad agenda. We can therefore see that there is possibly a need for centralized platform authority to have the power to moderate users' activities for the sake of the health of a platform. Traditionally above mentioned centralized platforms have the complete control over the user created activity data. Now the question arises whether the trust that people bestow upon these social media companies is well deserved, whether free speech violation is happening, whether algorithmic manipulation or experimentation to psychologically control population is happening without consent. During election season, Facebook has sold user data to Cambridge Analytica, often didn't take proper steps to stop spread propaganda. Algorithms created to stop hate speech, fact checking fake news produce a lot of false positive and suppress individual content creators. Twitter has suspended many accounts including President Trump that infuriated right wing groups. Even though some of these suspensions can be justified as they were deemed necessary to stop violence, the power in the hand of a single central entity to censor voice of individuals, organization are constantly being questioned. In one hand, users' *subjective contribution* , reputation need to be assessed to generate good feeds for a healthy platform,

but on the other hand the moderation techniques, algorithms controlled under closed source code, socio-politically biased CEOs, community moderators create censorship issue. On top of that, when social media company are primarily motivated by profits from advertising and not sharing revenues that users generate for them, crypto enthusiasts had to envision decentralized platforms where users can be brought back to the center of a content platform. What we can learn from the history of bad actions by the centralized social media companies and also the recent successful advance of bitcoin and other cryptocurrency is that we do not always need trusted middleman or central mediating authority to establish trust, we need more transparency in the policy making and governance algorithm and moderation rules. We can conclude that trust is required for users to engage in a platform with each other but decentralized social media can provide similar social experience by eliminating the need for centralized decision making.

Moments want to create a platform with full **transparency, no ad-targeting, openly visible moderation mechanism by democratically elected moderators** and **reward users for their attention and subjective contribution** that enrich the platform. If we look at the attention economy cycle - a) account creation b) user interaction via engagement (reactions, likes, comments, votes) c) original content production/generation/publication d) cross content posting via sharing e) marketing strategy for the growth of viewership, followership f) maximization of monetary rewards, badge collection or non monetary gains such as reputation/rank

4 Challenges in social networks and social blockchains

Users join and engage in a social network through their personal interest in various topics and genres and also through being introduced by their trusted friends. However, user retention and daily activity after initial account creation are always big challenges for social networks. Users like an engaging community where they can find friends, good quality channels, contents that attract them for educational and entertainment purpose and inspire them to engage. Decentralized social network like steemit, hive, dtube and others also face new challenge because contents are now created and curated specifically with monetary interest. And the promise of quick monetary gains typically attract bad actors. To find a successful method of determining good quality of contents and also distinguishing valuable, contributive users from bad users are the biggest challenge of public social blockchains. Contents and user provided information are stored in the immutable blockchain and deletion of contents and user committed data are not possible that lead to potentially exposure of user information (email address, location etc.) to bad actors. Decentralization require more user responsibility in terms of how regular users interact and provide information on the network about themselves that get registered in unchangeable blockchains. However, regular users are still not as responsible as they don't have enough technical knowledge of the inner workings of the blockchain. Therefore, decentralized social chains don't necessarily provide the information safety as traditional centralized platforms provide their users by storing information in private, guarded database. There is a steep learning curve for regular internet users in terms of how they can contribute to decentralized social networks and keep their token rewards safe and their identity secure from actors with bad intention.

Good content creators have the honest intention to create the best quality content and then get appreciated by fellow creators, followers and curators based on the quality of the content they offer. But because of monetary interest and the greed of earning token as soon as possible, the token based economy do not always lead the creators and curators to honest and fair behaviors. Decentralized social networks are threatened by following attacks and issues some of which are also common for their centralized counterpart.

- **Sybill attack** where single user create and run multiple accounts (cartoons) and spam the network. Fake pseudonymous identities used to vote, comment to selfishly earn influence and rewards cost the trust and reputation of the platform. Real users soon get frustrated as they can not trust the engagement they are receiving from these fake accounts.
- **Low quality or empty contents** are created by selfish token holders with potentially high voting power or reputation in the system to generate token as fast as possible. Typically these users don't have long term interest in the platform and do not care about growing the platform for endusers. Their greed for quickly generating tokens ultimately increase the number of low quality contents that hurt user sentiment about the platform.

- **Distributed Denial of Service (DDoS) attack** where malicious node owners send numerous spammy transactions to bloat the transaction pool and potentially halt the network activity and harm user experience.
- **Curation without quality assessment for quick gains.** Many curators don't necessarily engage with the contents by commenting. There is no good incentive to spend time per content as most users see it potentially more rewarding to jump to the next content and use a fixed percentage of their VP to curate content. But a curation based content feed generation can not be effective if majority of the voting are happening not to identify or rank good quality contents but only for own selfish gains.
- **Lack of downvoting/dislikes.** Most honest users have aversion towards negative voting unless the content is harmful, promote violence, abuse, hate etc. Even though the primary reason for downvoting is to rank a content, the equal division of voting power percentage for downvoting used in dtube or similar social network do not reflect how users have psychological reluctance towards downvoting. Instagram and other social media therefore don't use a dislike or downvote feature.
- **Bullying - Downvoting abuse to suppress channels or users.** We know that similar minded people group together and form certain ideologies and promote behavior aligned with their belief. However, in group members can show hatred or can be threatening towards alternative ideologies from outsiders specially when ideas or questions threaten their own belief. Even though we need to understand that misinformation and spreading of conspiracy theories and anti-science agendas are rampant, we should still be concerned when powerful users use their VP to suppress certain voices. The asymmetry in the power dominance in such downvoting abuse are difficult to address in a decentralized social network as fact checking and content moderation are not very effective. Unless we have sufficient amount of users and honest moderators who fact check and use their voting power to mindfully assess content quality and standard of the information, this is going to be an ongoing challenge. Muting the voice and nullifying accounts of small stakeholders by large stakeholders should be flagged and moderated from the protocol level.
- **Self-voting** is a mechanism of voting your own content while or after publishing your content. Self voting has been justified by many good creators as they view personal voting on their own contents as the reward for investing their time and energy for creating, editing and publishing a post. Specially on dtube, you can use 100% of your voting power towards your own post. Because of self-voting, users have no direct incentive to actually curate qualitiful contents for the platform. Moreover, self-voting whales have the power to use their voting power to put their contents into higher ranks in the hot or trending videos even though the quality of the contents are not necessarily assessed by the viewers on the platform. Self-voting quickly turn the creator platform into a mindless sharing platform where users are posting contents not necessarily for their followers but only for monetary token value.
- **Voting rings** Multiple users can create ring like structure to co-operate and deliberately vote each others' content that do not reflect the quality assessment, rather reflect group thinking and group partiality. The current token reward economics in decentralized blockchains are not addressing this issue but Moments hope to implement mechanisms to reduce activities surrounding voting rings.
- **Bot voting** There is a massive debate against node leaders whether bot activities should be permissible. Many leaders often support bot activities mainly because of the reward bots automatically can generate from them. Traditional networks like Facebook, Instagram also allow bot activities, bot-driven account creation and engagements to just inflate the number of daily activities on the platform. Sometimes content creators also expect curation bots to reward them with daily tokens as it's hard to deny such financial gains. However, Moments believe that if the ultimate goal is to create a platform where human users interact, engage to promote good quality content, algorithmic manipulation via bots should not be justified. It's a trap that a platform can easily fall into and can not change the bot dynamics later on. Here are the kind of bot activities that are common:
 - Curation bots to curate new contents, tags, authors and leaving trails based on fixed defined upvoting and tip percentage parameter

- Delegation bots - These bots seek for delegation or approval from stakeholders to target a post to make it viral. These lead to users renting their voting power or influence on the platform.
- Bid bots - This is one specific type of very popular delegation bot that accumulate power from users and then split the vote to the users who voted for it.
- Moderation bots - These bots can be both good or bad. These are supported by leaders or users to detect inappropriate, unlawful activities based on reporting etc.
- Lack of ability to engage new user who are willing to put effort for the subjective quality evaluation of contents due to their financial inability to acquire coins. Many honest users on the platform, specially from the developing world, are looking for a mean to earn token rewards. However, they may not necessarily have the financial means to acquire tokens. In one hand, without token stake, it's hard to assess the commitment of a user, however, if there is a pathway for this unwealthy curators or creators to earn tokens and contribute their valuable attention to enrich the platform, it can serve the platform. Currently most decentralized platforms couldn't establish a working protocol that can work for these kind of users.

engagement metric 1. Engagement time per content (elapsed time, interaction time) 2. Number of comments 3. Number of views 4.

5 Design Principles

5.1 Securing unique identity

We recognize that many of the issues that plague social media and specially decentralized social media are tied towards bad actors who can hide behind anonymous or pseudonymous identity. Bitcoin as a payment network and Ethereum and other similar social contract networks are primarily designed to provide ownership of money and by design attempt to provide privacy through public private cryptographic keys. We can also recognize the necessity for how good actors may anonymously publish contents that go against the interest of powerful organizations, governments and companies. Currently there is already existing decentralized media platforms like that which promote full privacy. But a social content platform for sharing personal moments, vlogs are by default created by users who are willing to compromise their privacy. Moments strictly envision to attract honest, open minded content creators who are willing to share their moments. Moments want to be a center for real unique human users who will have accountability towards the platform and are passionate to contribute through their contents and engagements to earn fair rewards. Moments will therefore separate its journey from the privacy focused crypto users who don't want to share real identities. But we believe this separation and design choice is necessary to battle the pervasive bot attacks.

- **Account creation.** Moments will allow creation of account through email address, or your facebook or instagram or major social accounts for viewing moments contents. But this accounts can not participate in the reward economy. Moments will not require mandatory provision of phone numbers or other personal information.
- **Eligibility for the reward economy** To engage in the reward economy, Moments will require each user to level up to be unique original creator share at least 30 second of video holding cards showing the date of the day and introducing themselves to the platform. Moments users will be provided a password for encryption that will be used to encrypt personal videos like that before storing on the Momentchain.
- **De-incentivizing negative action and punishing bad actors.** Unlike other decentralized platform, Moments will have a punishment mechanism for bad actors in the form of Account freezing. The determination of bad action will be in the hand of the community moderators elected in a democratic procedure based on their reputation on the platform. If an account is suspected for bot activity, spam activity and malicious actions mentioned in previous section, the account will be reported and will go through a decentralized judiciary committee. The whole account judgment procedure will be transparent where at every level moderators will have to give proper reasons for freezing an account for a period of time to disengage the account and the bad actor.

5.2 Decentralized moderation and governance

Hive, steem, dtube and other decentralized blockchain are immutable in nature and every social transaction like content posting, comments are sent to the transaction pool and get stored in the blockchain as first come first serve basis. The witness or leader who is responsible to create the current block of the blockchain take the recent transactions to populate the blocks every 3 second. There is currently no moderation layer used before committing the post to the immutable blockchain. Therefore, negative contents (harmful, unlawful, copyright violation, human rights violation), spammy empty contents all can enter into the blockchain without any scrutiny. On top of that, if these contents are posted by a stakeholder with high voting power, they can be ranked higher. This can easily lead towards propagation of false information and encourage extremist groups to majorly represent the network as we have experienced in the case of Parlor etc. This is one of the reason why decentralized reward based economy is still not popular to honest regular users who spend so much of their attention in platforms like Instagram, facebook. The decentralized social media are viewed under negative light that Moments want to change by following a decentralized moderation scheme.

- **Delayed transaction.** Blocks will include social transaction after a delay and within that period the moderation committee will moderate the contents and flag them as positive or negative. Initially Moments want 1 hour delay per post and allow moderators to moderate within that period.
- **Moderator election** Moderators are original creators with high reputation. Original creators will have to apply for the permission of moderation. The reputation in the chain based on activities, votes and approvals will be used for moderator ranking.
- **Incentivized moderation** Moderators will be incentivized with token reward that will come from a percentage of the new generated token.
- **Punishment for biased moderation** Moderator permission can be denied if certain videos get reported through the reporting mechanism after it has passed the moderation phase.

Many in the decentralized social chain space do not believe moderation to be useful or necessary which Moments of course oppose. As Moments is not trying to create a censorshipless, trustless platform, rather Moments envision to establish trust through pure and absolute transparency. Moments will censor contents based on the judgement of the moderators elected by the community members in a transparent manner. The difference of decentralized moderation technique in Moments from the censorship moderation in centralized platforms is the transparency in the different stages of moderation.

5.3 Presentation principles/techniques

Goal is to increase engagement and get meaningful content quality metric from the viewers. Intention is to change the pattern of mindless behaviors shown in existing social platforms.

1. Reduce content consumption (No sliding over multiple content, fast mindless swiping)
2. Increase engagement, attention per content (increase number of clicks per content)
3. Content page
 - Page 1 - Show content and start collecting engagement time (Reaction button appears after 3 seconds of content consumption)
 - Page 2 - Ask for reactions, tags and request for comments
 - Page 3 - Show all comments
 - Page 4 - Request to share content
 - Skip button in page 1 (skip comes with penalty)
 - Move to next content..

6 Blockchain basics

6.1 Collaboration Energy

6.2 Reactions and Voting

principles: no self-vote Clapping + Rea

3 buttons: Clap, React, Report

Existing social

Medium uses clapping

Clap and react are interdependent

Reporting reasons:

1. Breaks community rules
2. Harassment or bullying, Violent or repulsive content
3. Harmful or dangerous acts
4. Threatening violence
5. Hate (Hateful or abusive content)
6. Sexual content
7. Sexualization of minors (Child abuse)
8. Pornography + Involuntary pornography
9. Sharing personal information
10. Prohibited transaction
11. Impersonation
12. Copyright violation
13. Trademark violation
14. NetzDG report
15. Self-harm or suicide
16. Spam or misleading
17. Misinformation
18. Infringes my rights
19. Captions issue

6.3 Ranking of Moments

6.3.1 User reputation

6.3.2 Content reputation

6.3.3 Personalized content feed

Collab filter netflix movie recommendation

7 MomentChain: A social blockchain

purpose of a new social chain: 1. No chain to capture content quality - hive/steam chain are based on the idea that curators will be voting based on the content quality, however, it's easy to see that there can be unproductive, harmful monetary incentive. Example: turns out to be a profit maximization scheme and target for bot attacks: 1. voting without watching content, because the more you vote, the better your chances are to earn more. 2. You only vote popular creators, because then the chances of earning is higher 2.

decentralized identity

decentralized blockchain that helps

no ad open source code

experience score

proof of human

A feedback loop system (for reputation score, bot detection, human identity, good engagement)

EES (Experience and engagement score) 1. Unique, human identity

Moment	Steem	Avalon
A single liquid token	A single liquid token	3 currencies: 1. Steem Power: a staked asset that releases in 1/13th for 13 weeks. 2. Steem Dollar: a token pegged on US Dollar, but which actually isn't really pegged 3. Steem: a normal token you can actually sell on the markets, but it gives you no power on the network to hold it
Infinite monetization of contents through time	A content can be monetized 7 days only	Infinite monetization of contents through time
No cap to voting power, but voting power is earned based on the previous day of engagement, voting power is disabled for 3 weeks based on negative reports	Your voting power caps after 2-5 days of inactivity.	No cap to voting power, it keeps stacking up.
Daily limit of voting posts is 360 (assumption: 60 posts per hour * 6 hours)	No limit on total number of daily content votes	No limit on total number of daily content votes
You can only spend max 5% of your actual VP in 1 vote	You can only spend max 2% of your actual VP in 1 vote	You can spend 100% of your VP in 1 vote
Dynamic inflation scaling based on active userbase, but with an upper limit	Fixed pre-determined inflation, not scaling with userbase	Dynamic inflation scaling based on active userbase
One human max 5 account. Instant account access upon submission of proof of unique human, but fraud, non-unique accounts can be frozen	Takes weeks for a free account paid by SteemIt Inc. Forced to burn STEEM otherwise.	Instant account creation. Used to be Free if no username. Burn tokens to reserve usernames.
No need to stake your asset, but have a choice to stake for 4 weeks your VP/IP to earn IP inflation	Need to stake your assets 13 weeks to play the game	No staking, bandwidth and voting power is generated off the single liquid token
No staking, voting/influence power is generated based on token, activity and reputation	Wait 7 days to collect rewards	Instant rewards
Commitment to external cause/donation	No commitment	No commitment

8 Proof of Experience/Engagement - Blockchain basics

8.1 Consensus algorithm

Moment blocks in the moment chain are produced by the miner nodes. All miners are influencers but not all influencers are miners. Moment influencers who participate in the mining procedure are the participant nodes who seek for voting approval from moment users. Miner ranking = $1/2 * \text{Approved MC} + 1/2 * \text{Influence Power}$ based on reputation This is where momentchain differentiates with hive, steem and avalon chain by weighting user reputation equally to monetary approval. Influencers who are contributive to the platform are more likely to have interest in the health of the platform rather than milking coins for trading. Reputation is calculated based on prior engagement in content creation, curation and commenting. Block creation interval is 2

seconds. Each block produces 2 Moment coins. Therefore, 60 moment coins get generated in an hour. $2/3$ of $25 = 16$ miner nodes need to have consensus to generate the next block. 25 miner nodes take turn every 2 seconds in a cycle to produce the blocks. Each participant node will have to announce their sync status Every day, 1 special block is created with X amount of coins. $(X - 2)$ coins are equally distributed to randomly chosen Y miners outside of the top 25 miner nodes. X is a function of the content, participation and contribution activity in the platform for that specific day. Y is random number chosen from the total number of secondary participant nodes. 20 slots out of 25 nodes are fixed slots, 5 slots are partially transient slots. Every day, 5 out of primary 25 miner node is forced to become a secondary node and 5 participant nodes which haven't mined for last 5 days are randomly chosen.

9 Moment coin - Token economy and business model

9.1 Supply Initial allocation

References