Unimoon Litepaper

Dale Song
Karl Mozurkewich
hodl@unimoon.io

October 11th, 2021

Abstract

Unimoon is a Decentralized Media(DeMe) network built to create more
self-sovereignty for individual users and the energy they commit to
interaction. The energy, popularity, reach and engagement of media
objects is represented through the use of the Unimoon coin. When a
piece of media is created and published the efficacy and absorption
radius of that media is measured by its Social Activity
Coefficient(SAC). The Unimoon platform will dynamically calculate
the SAC value of an individual piece of media based upon that media
object's engagement curve over the course of its lifetime receiving
Unimoon coin rewards. Users who interact with – view, amplify,
modify, create – a media object will receive Unimoon tokens based on
the accrued SAC value. Unimoon holders are incentivized to unlock
utility of the token through various mechanisms that allow tokens to
be utilized within the Unimoon network and ecosystem. The goal of
Unimoon token mechanics is to incentivize healthy growth of content
and services while creating more transparency for the exchange of
human energy to nearly instant realized value distinguished by a
user's uploaded media object's engagement curve on the network
through a decentralized social media platform.

Introduction

Unimoon - while taking cues from the established virality of the Memecosystem, aims to refactor social media for the next generation of users that have an expectation of ownership, higher level of privacy, and greater control of their created content. Incumbent social network platforms have demonstrated various degrees of failure regarding user empowerment and sovereignty. We believe that with the maturity of Blockchain data structures and the use of PKI mechanics higher-up in the application stack, there is a better way to allow users to assert self-sovereignty over their electronic personas. In addition to retaining authoritative control over their created content, we believe users are not properly compensated for their activity spent within social networks: be it viewing, posting, creating, discussing or collaborating. We believe the Unimoon token will represent a fairer ecosystem for creation and consumption of media between users because of the decentralized economy and decentralization of (social) media, DeMe. This is to say disintermediating the social media world with programmatically sound computer code will replace the traditional social media platforms we all use today prioritizing users first through users having ownership and better control of media objects uploaded to the network. This is only possible in a truly decentralized economy.

Motivation, The Market, and Gaps

The current super majority of social networking platforms is highly centralized and managed. In the past several years leaders have emerged that represent various groups and engagement modalities. Facebook for friends and family activities, Twitter for anonymous shit posting, Instagram for visually optimizing your life, LinkedIn for optimizing your professional life, and TikTok for short easy-to-digest videos tailored for your interests. Each platform allows users to post, update and share content, ranging from text-based content to rich-media content. Current social media platforms have evolved - using the same basic features - to service topic-based market verticals, which is where each platform draws its differentiation from. We looked at the current landscape of social media giants and realized innovation has all but disappeared over the

past five years, along with the evaporation of user control and content ownership. Continually social media companies treat their users as products instead of content creators.

Growing share of Americans say they use YouTube; Facebook remains one of the most widely used online platforms among U.S. adults

% of U.S. adults who say they ever use ...
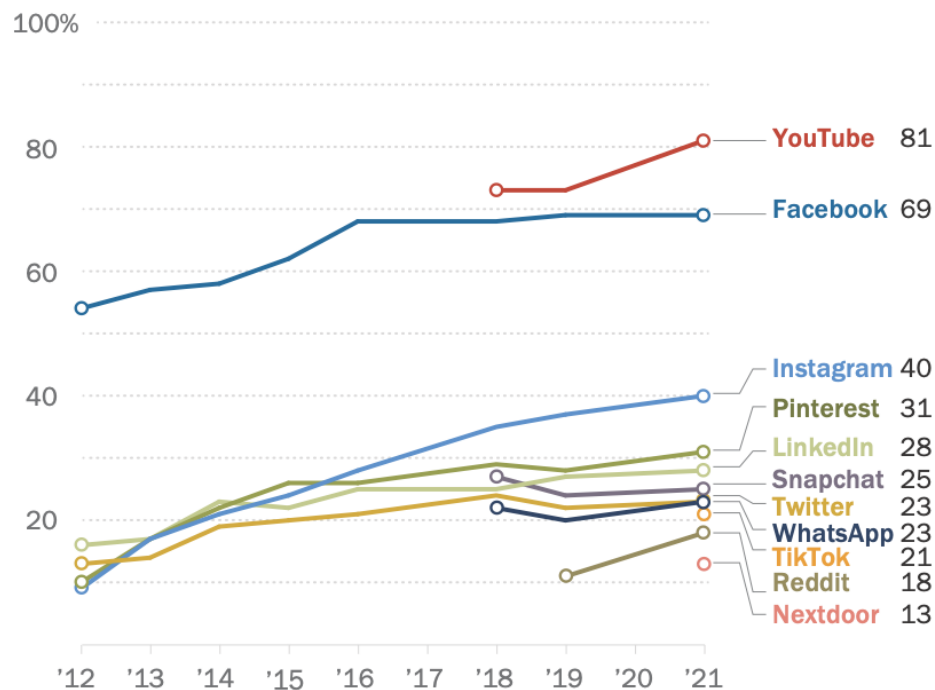
Note: Respondents who did not give an answer are not shown. Pre-2018 telephone poll data is not available for YouTube, Snapchat and WhatsApp; pre-2019 telephone poll data is not available for Reddit. Pre-2021 telephone poll data is not available for TikTok. Trend data is not available for Nextdoor.
Source: Survey of U.S. adults conducted Jan. 25-Feb. 8, 2021.
"Social Media Use in 2021"

PEW RESEARCH CENTER

Figure 1. Percentage of US adults using various social media platforms [Pew Research]

While the adoption of social networking platforms has steadily increased over the years, what has emerged is fragmented usage based upon what role a user wants to play relative to their social network.

It is part of our thesis that use of generalized social media platforms by users will decrease over the next five years, with users only engaging with social media for specific event-driven reasons, instead of broadly consuming content. We think this decline comes from a lack of incentive structure that allows a user to truly own their online presence, content and experience.

The Problem

At this time the core problem with social networking platforms is lack of sovereignty for individual users. Each user relies solely on the features and functionality afforded by the social media platforms. While these platforms have invested heavily in making a cohesive experience - through the development of mobile and desktop applications, integrations with 3rd-party services, evolution of developer ecosystems - social media platforms have focused on two primary mechanisms to ensure their engagement stability:

> Identity - each social media platform has a native identity mechanism that associates a user's selected persona to content and activities in the ecosystem.
>
> Engagement Model - each social media platform has generalized CRUD(Create, Read, Update, Delete) content mechanics for the population. The reduced friction between user and platform in creating/consuming content has allowed platforms to create heuristics on time-series data naturally created by user activity, making users the product the platform offers to 3rd-parties.

With current technology it's not realistic that individual users - even cohorts of users - create a fully-featured social media platform. Heuristics + Identity have created incentive mechanisms to favor supporting the organizations and ensuring longevity of business processes. The distribution of media and the true value of a media object on traditional platforms is completely skewed as a distribution platform.

For Web3, the current problem the Unimoon team aims to solve is the technological gap the average user has regarding cryptocurrency. Despite having many benefits and allowing the disintermediation of financial services, people can't take advantage because they simply don't know how and the curve is too steep for most to learn. By providing a familiar user experience, Unimoon is targeting mass

adoption of crypto-related technologies while not introducing friction to the social media experience.

In addition, there are still inefficiencies to be explored with the current content distribution models including all social media (FB, Twitter, Instagram, Snapchat, TikTok) and entertainment media platforms (Netflix, Hulu, Prime Video) with whom primarily benefits the most from the exponential growth that the platforms experience due to the demand of fresh targeted content.

"Technology has ended ownership but can now reinvent it. Against big tech dominance, regulators, creators and consumers are reasserting the benefits of owning things"[1]

John Thornhill, ft.com

The Solution

Because of walled gardens leading social networking platforms have created, primarily showing apathy towards identity sovereignty for individuals and the attention they contribute to networks, the Unimoon team formed an experiment to provide an alternative. Looking to create a user-focused social media platform while at the same time helping to provide thought leadership and detail to the emerging Decentralized Media space.

Use Cases: Utility + Governance

Social Media Application (uMoon)

It's critical to have the first application using the Unimoon platform be something that is recognized by consumer users. As we are targeting the consumer user cohort, our goal is to provide a familiar social media experience to platform users. Providing standard features such as publishing content, discovering content, and connecting with other users on the platform is required in addition to the main new feature of calculating and distributing native Unimoon coin based on the calulated SAC values from the L1 smart contracts. While the initial MVP release of this application will

provide basic social features it is expected future iterations will explore and expand use cases that are exposed when a web three community reaches critical mass.

NFT Minting, Management and Market-Making

Along with creating and managing content, providing users the ability to certify and establish provenance of their content is a key pillar of the Unimoon project. Part of the Unimoon team's thesis is that uniquely identifying content and establishing ownership from the content creator will allow interesting dynamics to emerge across the network. The team plans to explore giving individual users a familiar and seamless experience to create an NFT from their social media profile. We believe empowering an individual user to create an NFT from their social media post and profile will create interesting applications of the NFT construct. This will include a dashboard of user's social media data analytics of engagement information, which will create a fairer and more transparent marketplace.

Identity Wallet

The Unimoon team holds as a core tenant they write for individual users to assert their self-sovereignty. While reviewing existing social media platforms it became apparent that platform native digital identity solutions are an impairment to users controlling their personas, online and in the physical world. Blockchain data structures, along with PKI designs and the emerging Decentralized Identifiers specification from the W3C, supply the means for users to authoritatively demonstrate provenance for electronic transactions. The Unimoon project looks forward to experimenting use cases that integrate a familiar consumer application experience with decentralized technologies.

Streaming Application

We expect many consumer users to interact with the Unimoon platform in similar ways that users interact with familiar social media platforms today. The Unimoon team recognizes that ecosystems often have power users, and in the case of social networking platforms, those power users are often represented by content creators. The Unimoon team feels that content creators appreciate an enhanced creative and publishing experience and want to make it great to provide real-time high-quality media to platform users.

Advertising

Unimoon Coin as an Advertising Currency Unit

Unimoon coin will be the only supported currency unit for
advertisement from within the entire Unimoon ecosystem and with all
future DApps built on top of Unimoon L1. The first social media
application, uMoon, will support advertisements along with having an
extensive dashboard for a rich set of data and analytics for
advertisers to have more confidence optimizing on marketing budget to
achieve specific campaign goals. Such targeting will be based on data
acquired from the social media application but not limited to
interests, age, geolocation, and user behavior. This creates a
natural equilibrium between the demand of the Unimoon coin and the
rewards distributed to engaged Users of uMoon.

Advanced Advertising System

There will be multiple avenues to advertise on the platform similar
to traditional advertisements seen through Facebook, Instagram, and
TikTok. Similar to traditional advertising auction systems,
advertisers can choose to use manual or automatic bidding with
defined parameters of budget and other KPIs such as CPC, CPM, CPA,
CPL, CTR, and CR depending on an advertiser's targets and campaign
objectives. Additionally advertisers will have more options for
advertising with direct influencer marketing selections straight on
the social media profiles. With direct influencer marketing options,
advertisers can book advertising slots directly. Advertisers can
select target audiences with the dashboard and select specific
campaign objectives.

The advertising revenue generated from the Unimoon platform will
programmatically re-distribute to holders of Unimoon as an additional
reward mechanism for holding. This is another utility that creates a
more balanced ecosystem between the rewards distributed from social
activities and the rewards distributed from the advertising revenue.
It creates a fairer distribution of value. The network will take
approximately 20%(not a standard split so percentage taken for the
network may be smaller depending on the function) of all revenue
generated including advertising, premium content, subscriptions, NFT
crowdloans and other revenue generation which will be used for
operational expenses such as the social activity rewards, foundation,
transaction fees, minting NFTs. In this way transactions on the
network can potentially be free.

Governance

The Unimoon layer 1 will have a DAO that will help regulate and shape
the future ecosystem of the network. The goal is to provide a
decentralized system under the democratic supervision of a multi-body
censorship-resistant governance protocol. This way the governance
will have checks and balances to rid collusion and any one person
from having too much influence within the protocol. No single body or
committee will have the ability to propose and decide a specific
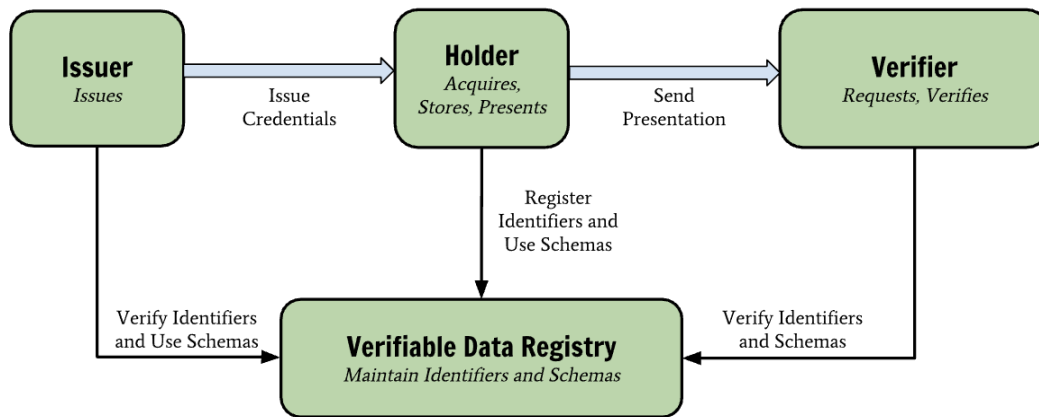decision which creates a separation of power to avoid self-selection.

Figure 2. The roles and information flows for the verifiable
credentials specification

The multi-body governance will implement verifiable credentials
attesting to specific qualifications as necessary for efficiency and
optimized for professional solutions as required for proper and fair
Unimoon governance.

4. Conclusion

The principles and practices of Classical Athenian democracy provide a valuable starting point for designing a modern democracy, which can be scaled to any size. The model presented here fulfills the Athenian principles of political equality (*isonomia*) and the freedom to speak and contribute to the democratic decision-making process *(isegoria)*. It capitalizes on the Athenian practice of using multiple representative bodies, selected by lot, providing a system of checks and balances. Finally, this model resolves the five dilemmas of conflicting objectives, discussed above (see Table 1.).

Table 1. Resolution of Dilemmas by Use of Multiple Sortition Bodies

First objective	Conflicting objective	Resolution
maximizing descriptive representativeness	maximizing interest and commitment among members of a deliberative body	Policy Juries maximize descriptive representativeness, while the Councils and Panels assure commitment
frequent rotation, to broaden participation and increase resistance to corruption	longer terms of office, to maximize participants' familiarity with the issues under consideration	Policy Juries have frequent rotation and broad participation, while the Councils and Panels allow development of expertise
every citizen's assured right to participate	avoid domination by special interests due to self-selection	Interest Panels and petitions allow any citizen to contribute, while Review Panels, and ultimately the Policy Juries protect against participation distortion
maximizing problem-solving ability through internal discussion and debate	avoid polarization and group-think	Councils and Panels promote give and take problem solving, while Policy Juries protect against both polarization and group-think
maximizing democratic power by having a deliberative body with broad powers to set its own agenda, draft its own bills and vote them up or down	avoid arbitrary decisions that are overly sensitive to the inclinations of a few unrepresentative charismatic members in an allotted body	Councils allow democratic control of agenda and process, while Policy Juries protect against extreme influence from powerful individuals

Figure 3. Advantages of Multi-Body Sortition Governance Model

Network Considerations

Validators

While the launch of the testnet will be supported by the Unimoon team, the longer-term goal is to create a distributed network of validators that support the Unimoon mainnet. While in early discussions, there is a desire to reward validators specifically for keeping the network secure.   It is critical that a proper incentive structure is created to make it worthwhile for validators to prioritize the health and positive operation of the Unimoon network.

Critical Transaction Scalability

While there are many service calls required to support client applications against the Unimoon network, there are a small number of inter-client transactions that become critical to the successful growth of the network. Though not exhaustive, the following are some "Transactions of Interest" the team believes will be on our critical-path for providing reward and activity calculations, in addition to being areas of analysis for enhancing network scalability and performance:
- user "like" of content (& propagation)
- user "view" of content (& propagation)
- user "share" of content (& propagation)
- Duration of user "view"
- Quality of user activity history (calculation)
- Taxonomy-related indexing of content
- Subgraph reorganization of content preference

System Architecture

Unimoon aims to first start by providing a familiar social media experience to the user community. While the goal is to provide an enjoyable and natural engagement experience, behind the scenes the Unimoon layer-1 will be responsible for recording content provenance

and also recording the exchange of attention between users of the Unimoon platform.
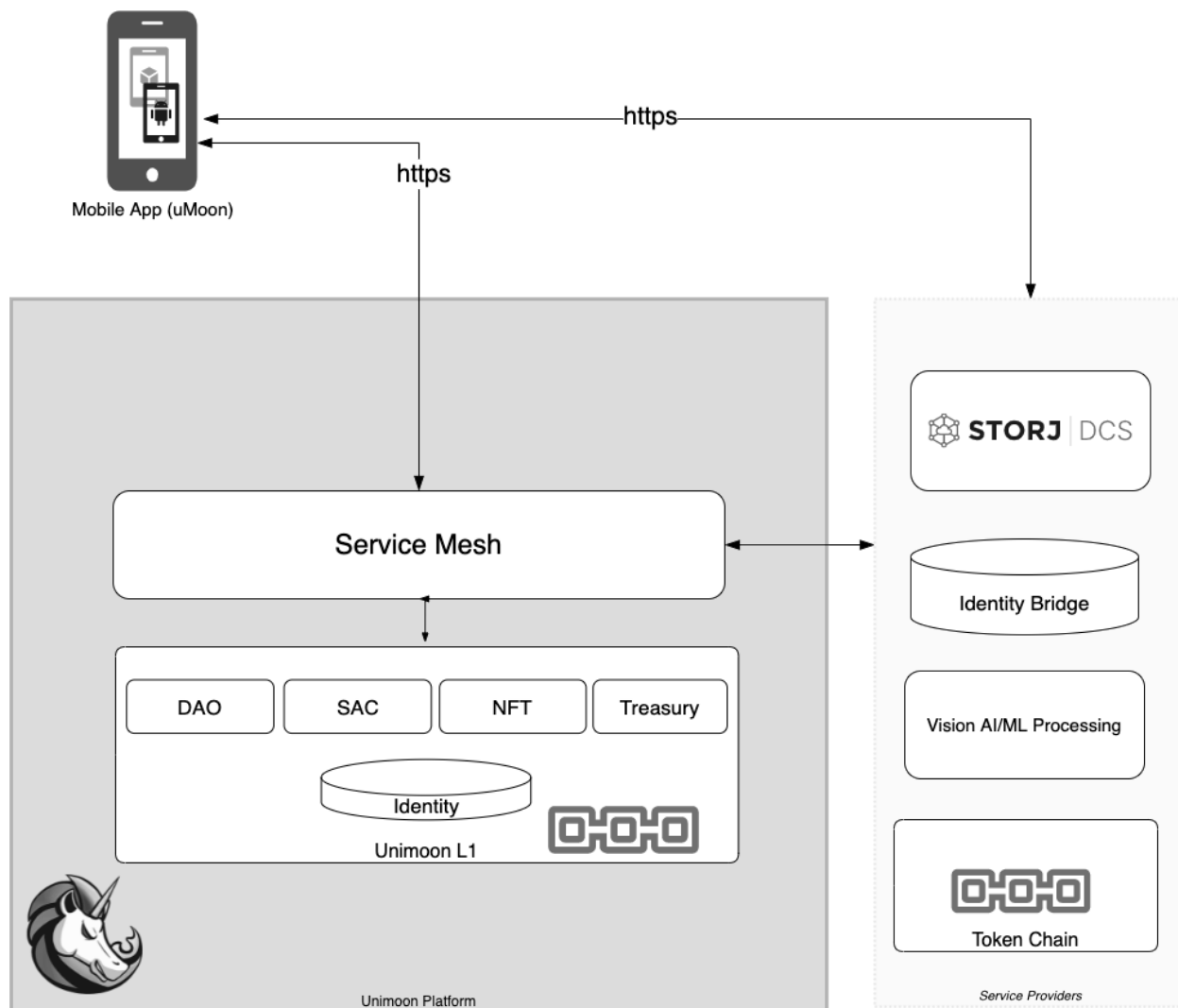

Figure 4. Unimoon Logical Architecture

With the goal of providing a next generation decentralized social media experience, the Unimoon team holds no orthodoxy around crypto purity. Using distributed system architectures and decentralized data structures, combined with lessons from PKI, we believe in efficiently applying blockchain technology where it benefits the users self-sovereignty.

Key requirements of the the Unimoon L1 are:
- High throughput and high TPS (fast finality)
- Ability to expand the Validator/Node community over time

- Support a 3rd-party client and development ecosystem
- Support deployment of Bridges to other Mainnet/L1 networks

Based on the requirements, Unimoon is aiming to fork Solana due to its advanced consensus algorithm, Proof of History (POH), [2]a clock before consensus; which helps the network validate the time of transactions because the protocol doesn't have any dependencies on local computer clocks between state transitions beyond the Verifiable Delay Function. The VDF requires a specific number of sequential steps to evaluate, yet produces a unique output that can be efficiently and publicly verified.[3]
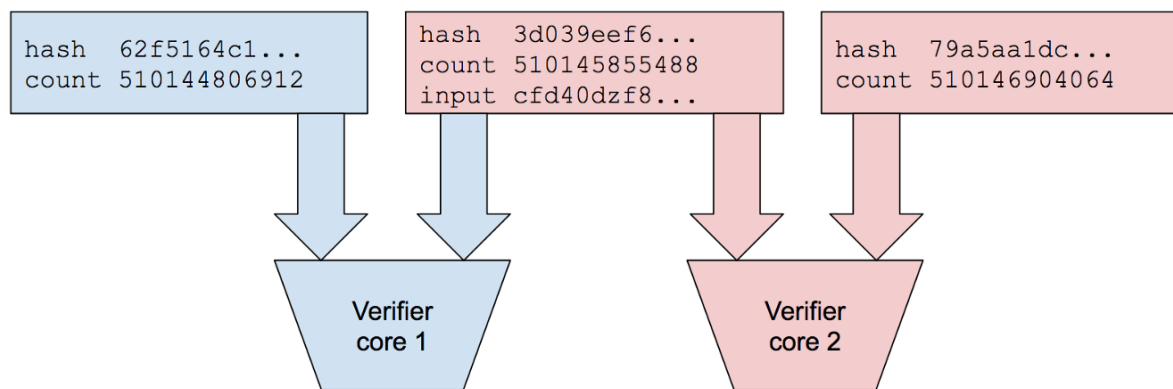


```
hash  62f5164c1...
count 510144806912
```

```
hash  3d039eef6...
count 510145855488
input cfd40dzf8...
```

```
hash  79a5aa1dc...
count 510146904064
```

Verifier core 1

Verifier core 2

Figure 5. Parallel Verification

"Synchronized clocks are interesting because they can be used to improve the performance of distributed algorithms. They make it possible to replace communication with local computation."

— *Liskov, B. Practical uses of synchronized clocks in distributed system*

The result of synchronized clocks before consensus algorithm is a very high throughput rate without sacrificing network security. Therefore, Unimoon is confident in implementing a fork of Solana as a highly scalable blockchain that will offer the most performant functionality to be able to support the potential current social media landscape on our Unimoon blockchain at 0 or near 0 fees. Furthermore, the average User demands and expects instant access to content, near instant

on chain confirmation of claimed rewards, without astronomical fees or delays in accessing/uploading content so this would be the base standard for what Unimoon promises to deliver to create a truly outstanding decentralized social media user experience.

Therefore, at global scale without the proper planning and infrastructure to support mainstream adoption it would result in high tx fees, slow confirmations to claim rewards with constant network congestion which would make the Unimoon platform useless. Therefore, forking Solana, initially as a permissioned layer 1 blockchain for the Unimoon ecosystem is to support future global mainstream adoption as the first blockchain specifically designed as a social media protocol focusing on the user experience.

Tokenomics

The Unimoon token is a utility token that represents the transfer of attention from one ecosystem participant to another. The token represents the amount of engagement and activity a particular piece of content or media has accrued. If a user likes a particular piece of content or media that individual user can choose to endorse and amplify the reach of that specific piece of content. The wider the reach a piece of content has, the more tokens the owners of that content can receive.

While token volume will increase relative to a piece of content's popularity, the Unimoon team sees exploratory mechanics related to token liquidity, rewards, and content boosting.

The goal of Unimoon token mechanics is to incentivize healthy growth of content and services while creating transparency for the exchange of human energy to nearly instant realized value distinguished by a human user's media object's engagement curve on the network through a DeMe platform.

Distribution

Launch breakdown as follows:

11.7%	Marketing
5%	Celebrity Endorsements
20%	Burn
10%	Team
10%	Development - Technology
26.4%	Pre-sale
8.45%	Ecosystem
8.45%	Foundation

SAC

The social activity coefficient, or SAC, is a major ingredient in the Unimoon secret sauce. The SAC algorithm will be implemented as a set of smart contracts deployed to the Unimoon layer one. These contracts are responsible for analyzing and tracking content interaction relative to users within the Unimoon ecosystem. The SAC, over time, will have the ability to recognize quality content and provide the mechanics for users to identify that content. A piece of content will have a higher number of plays and actions taken on a media object if the content distribution is favored based on users content variety through the systems algorithm which is mathematically evaluated. The SAC will quantify based on the content distribution and content variety of the evaluated media object.

Along with self-sovereignty, Unimoon aims to enable users to be rewarded for recognizing content that is popular before it becomes so. Through the use of the Unimoon token, users are able to incentivize the ecosystem to develop quality content in the hopes the platform fosters and promotes what makes us human and does not detract from it.

Users of Unimoon will be able to claim rewards based on the SAC value accrued per user straight from your social media profile dashboard which will be measured on every 24 hour epoch interval.

Vision and Roadmap

The Unimoon project team has an initial focus on an MVP release approximately three months after launch. While the size of the community will determine the set of features delivered for MVP, the minimum set of features includes a familiar social media engagement experience integrated with the Unimoon layer-1 to track activity related to SAC calculations.

Future use cases are constantly being explored and considered. The Unimoon team is excited to build out working relationships with the user community and broader developer ecosystem in the web3 space. Some of the ideas being explored are:

- NFT - crowdfunding for creation projects. Exploring models where advertising can subsidise minting enabling free services for users.
- Build relationships with wider community projects

Q3 2021

- Protocol Conceptualized
- Protocol Planning & Discovery Phase

Q4 2021

- Pre-Sale & Full Launch
- CMC & Coin Gecko Listing
- Expand Marketing Team
- Social Media Campaign
- Setup BNB/UNIMOON LP on PancakeSwap

Q1 2022

- Artist Initiative Launchpad + Hype Marketing Growth
- Social Media Campaign Expansion
- Major Celebrity Endorsements
- uMOON MVP Soft Launch
- UNIMOON Layer 1 Testnet Soft Launch

Q2 2022

- Massive Marketing + Partnerships
- Major CEX Listing
- NFT marketplace & uMOON NFT integration
- uLIVE Soft Launch
- Bridges to Ethereum and Solana
- Initiate UNIMOON Humanitarian Foundation

5 Year

Full decentralized media hub serving as a more efficient and fairer alternative for media production and distribution than Netflix, Hulu, and Prime. The term "user" becomes synonymous with "Creator" and "Maker". Anyone with a mobile device can create a piece of content, mint it as an NFT and demonstrate ownership. Full Unimoon marketplace with escrow services paid and received in Unimoon coin. Social applications such as gaming, dating, traveling, dining, booking, will all have functionality with further utility with the Unimoon coin on the Unimoon L1.

20 Year

Unimoon is a household brand name that is an extension of people's daily lives fully integrated as a convenience and technology providing opportunity to create, consume, and become a publisher on a fully decentralized media network. Major media organizations with Unimoon to engage with users and allow users to provide content back to media organizations seamlessly. Unimoon has created a new dynamic allowing individual humans to not only work flexible schedules, but contribute more attention on hobbies and creative and intellectual pursuits.

NOTICE AND DISCLAIMER

References
[1] John Thornhill
https://www.ft.com/content/caab6fa0-df68-49f0-86ce-0f7e2a90bb55

[2] Anatoly Yakovenko. Solana: A new architecture for a high
performance blockchain v0.8.13

[3] Anatoly Yakovenko, Solana,
https://medium.com/solana-labs/proof-of-history-a-clock-for-blockchai
n-cf47a61a9274

[4] https://www.w3.org/TR/vc-data-model/

[5] *Bouricius T., (2013) "Democracy Through Multi-Body Sortition:
Athenian Lessons for the Modern Day", Journal of Public Deliberation
9(1). doi: https://doi.org/10.16997/jdd.156*