MOD-11

Decentralized, not merely Blockchain-based.

V1.0

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I. Introduction

Originated as peer-to-peer payment without trusted third party[1], cryptocurrencies like Bitcoin has not only created a value network that are dubbed by some as “internet of money”[2], but an entire ecosystem of its own. Systems such as Ethereum[3] with comprehensive on-chain programming language ("smart contract") enable the network[1] interfacing to the public via new kind of applications that are built with decentralization and immutability in mind, thanks to the underlying Blockchain technologies.

One unique aspect of decentralized applications (dApps) is that it expands the definition of transactions beyond exchanging values. One can view Ethereum network as a “transaction-based state machine”[4] where interactions with on-chain smart contracts are also done by performing transactions. This design, however, implies two considerations for dApp developers and users:

First is the deep tie between wallets that hold funds to the applications, regardless the purpose being related to finance or not. This is why fraudulent dApp becomes common problems in current dApp ecosystems[5]. As it is often unavoidable to interact with dApps (such as a DAO voting dApp) by connecting wallets or even performing transactions. The current trend of building dApps using existing Web 2.0 infrastructures only further worsen the fraud situations.

Another issue is related to blockchain scalability: When a smart contract becomes the passive payee of a transaction, many off-chain scaling solutions such as Lightning Network, which facilitate channels for recording off-chain payments before finalizing settlements on-chain, cannot be adopted to address the need for transactions of smart contract calls.

In this paper, we introduce MOD-11, a full-stack solution of dApp ecosystem with open source software development kit focusing on seamless integration between applications to local full

[1] As interoperability between Blockchains becomes reality, here we are speaking in broader terms of Blockchain-based value network as a whole.

node. This design enables truly peer-to-peer dApp architecture with advantages of ensuring the trustless, censorship-free ideals of Blockchain being expanded to cover off-chain infrastructure.

The long-term vision of the platform leads to many expansion of capabilities through pluggable system design that can be realized over time. Features such as peer-to-peer delegated transaction network[2], reusable UI libraries, enforced dApp submission with review process via on-chain release management, can further improve user experiences with consistent user interface as well as fighting fraud through app reviews and by empowering users to independently verify package metadata recorded in smart contracts.

Finally, being built on top of same open standards also enables members and developers of MOD-11 to naturally share common scaling solutions, such as implementation of a Plasma sidechain[6] within the whole ecosystem.

II. Key principles

Before moving on to introduce each component of MOD-11 SDK and ecosystem plans in details, we feel like to provide more rationale regarding the design choices made. These choices are reflections of opinions we have on cryptocurrencies and Blockchain-based systems:

2-1. Decentralization

Many dApps on Ethereum network today are hosted the same way as conventional website and utilize software extensions such as MetaMask[7] for transactions in favor of easy access through web browsers. While this approach certainly makes Blockchain and dApps more approachable to general public as well as web app developers, it discards most of the benefits of Blockchain which enables peer-to-peer network, rapid data queries via local block storage, and independent transaction verification.

The deep tie of dApps to web browser via conventional web hosting services make wallets and the associated private keys subject to malicious attacks[8] and censorship. In addition, the current approach of dApp building through web browsers also makes it difficult to prevent frauds, since malicious parties can easily “clone” from legit websites and republishing under similar domain name with bad intents. Regular customers or dApp users has no easy way to avoid or identify these frauds.

[2] Based on ERC-865 standards, along with dedicated peer-to-peer network for signed data relay and incentivized delegators for on-chain executions.

It is for these reasons we choose to build dedicated UI layer functioning like standalone apps instead of web browser[3], along with package management via on-chain metadata for verifications. While many web technologies are in use, we are not envisioning the future of dApps as browser-like, web-based platform: dApps should be open sourced, securely bundled and distributed in tamper-resistant ways to enable independent verification and access via Blockchain peer-to-peer network.

2-2. Governance

The decentralized nature of Blockchain systems often leads to deliberate absence of central authority to dictate decision making. As a result, governance of such systems and their participants have been proven to be extremely difficult, if not controversial [9][10]. For MOD-11 ecosystem governance, we propose a two-stage approach with partial centralization at first regarding dApp creation and review processes, as well as infrastructure for data feed services (oracle) in order to anchor a firm root for MOD-11, and then gradually improve the system governance with greater decentralization and third-party participation.

Our approach to dApp ecosystem is inspired by existing implementation of "app stores" on modern computers or mobile platforms, which binds payment / transaction mechanism with dedicated set of application selections that require standard review process instead of being wide open for permissionless participation. While blockchain should be, to the extend possible, a permissionless system, we believe this approach is necessary to balance between open participation and preventing fraud or counterfeit applications.

Ultimately, the governance of MOD-11 ecosystem has to be done with broader participations, which will not only create more sustainable future for MOD-11 itself, but also improve the transparency of the decision making regarding its core business plans. These visions drive us to explore the creation of our own DAO (Decentralized Autonomous Organization) to not only enable decentralized on-chain governance, but also can be used for fundraising[4] that allows further ecosystem development and dApp creation[11]. Please refer to chapter V for full details regarding tokens of MOD-11 ecosystem.

2-3. Scalability

With rapid development and global awareness, Blockchain systems today are facing many challenging issues. Scalability is one major problem among them. Various solutions have popped up claiming to have "solved" the issue[12][13]. We believe that Blockchain scaling solutions cannot sacrifice decentralization, since it is the main differentiator from conventional

[3] This is the reason why we don't use Mist, the official app 'browser' for go-ethereum node.
[4] Via SAFT (Sample Agreement for Future Tokens) with full compliance under organizational jurisdiction.

cloud services and data centers. It is pointless to discard this innovation by repeating what has been done in web 2.0 era and turn “Blockchain” into merely a marketing buzzword.

As an active participant of Blockchain-based decentralization technology, while the scalability of MOD-11 ecosystem ultimately relying on fundamental technological advancement of underlying Blockchain (Ethereum), we plan to proactively engaging and experimenting many upcoming scaling solutions, such as peer-to-peer off-chain state channel and Plasma side-chain, which can be implemented to have minimal impact toward overall system decentralization.

III. Platform design

3-1 Overview

The character “d” in the word “dApp” implies “decentralized,” due to the adoption of Blockchain. Yet in reality, dApps require additional off-chain components that work in conjunction with on-chain smart contracts, which are often outside the scope of the Blockchain peer-to-peer network. Perhaps for the sake of faster time-to-market, many dApps today choose to build on top of existing web 2.0 infrastructure that provides little or zero decentralization against censorship, denial-of-service, or any form of attacks against single-point-of-failure of the system.

In other words, from the full system point-of-view, Blockchain is just one of the many components in dApp architecture. Before any user data or transactions reaches the Blockchain peer-to-peer network, any centralization in other system components could defeat the purpose of its adoption. Since Blockchain is essentially cryptographic protection scheme against Byzantine failure with emphasis on the distributed nature of what it protects. When a dApp choose to expose centralized entrypoint for its users, the benefits offered by Blockchain cannot cover their actions with the app. Instead this design simply benefits the few entities behind dApp operation: Under the "false sense of decentralization", these entities actually turning themselves into overpowered trusted third parties which all of their dApp users must rely on.

MOD-11 platform is created to harness the true power of decentralization by extending the characteristics of Blockchain systems toward the off-chain components found in each layer of its application architecture. We believe that as Ethereum network reaching its 2.0 upgrade with Proof-of-Stake consensus, along with the maturity of many core components, such as Whisper and SWARM toward the vision of decentralized Web 3.0, many dApp users will become aware of the “false sense of decentralization” from existing dApps and embrace platforms like MOD-11 to usher in a new era of decentralization.

3-1. Architecture

Figure (a) below gives an abstracted architectural illustration of an MOD-11 node connected via Ethereum peer-to-peer protocol. Countering common misbeliefs and pitfalls regarding dApps developments with local full node, MOD-11 introduces several thin software stacks that enables the decentralization of Web 3.0 using existing technologies. We will walk through the core components of the platform in this chapter.

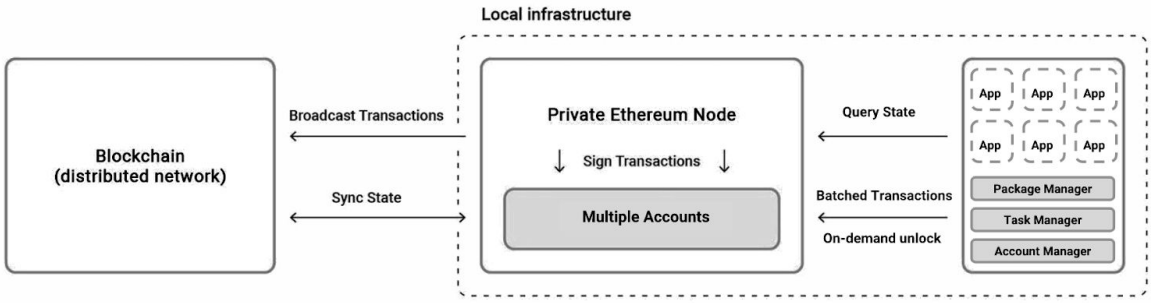

Figure (a)

3-1-1. CastIron middleware

Building on top of Ethereum Blockchain, the software stack of the platform naturally utilizes existing Ethereum dApp building blocks. By extending existing Web3 javascript API, CastIron, a thin middleware between UI and Ethereum full node, is built to form the common foundations of MOD-11 platform and expose unified API for dApp developers, allowing them to focus on smart contract and UI components without worrying full node communications, transaction handling, or account managements.

The core idea behinds the middleware is to create asynchronous batched job queues that integrate Ethereum full node and password manager to the dApp platform. Supporting both regular Ethereum transactions or smart contract calls, the middleware offers APIs with proper abstractions to simplify dApp developments. The combination of batched queue and dApp specific logics allow developers to design *autonomous* transactions triggered by specific chain state or user-defined conditions. To achieve this, CastIron middleware incorporates Reflux-driven chain state observer, and adopted other open source projects such as Keythereum Javascript library for account key management as well as Buttercup for password management of accounts on the local full node.

In terms of developer experiences, we have been developing CastIron middleware towards full fledged software development kits tailored for MOD-11 that offers rich, ready to use libraries, documentation, along with unit test capabilities. It is also planned to package and ship MOD-11 node using container technology to simplify initial setup and upgrade process.

3-1-2. Bloodline (package metadata) registry

As mentioned previously, fighting counterfeit dApp frauds is one important goal of MOD-11 ecosystem. By using Blockchain as source of truth, MOD-11 creates an alternative version of "the headless web"[14] that works with these state data and creates user experience of *verifiable* native apps by offering an architecture that promotes user controls and independent state verification, while reducing developer freedom in terms of app submission[5] and development stack of choice. The enabling technology of this vision is our ecosystem-wide package registry called Bloodline.

By enforcing dApp review via submission for records on Bloodline registry, MOD-11 aims to create a curation of high quality dApps under unified, familiar user interface that are not only useful, but can also prevent fraud / counterfeit with release management concepts implemented through smart contract. This empowers users to have multiple ways of verifying the authenticity of each dApp. It is also in our plan to host dApp packages via decentralized peer-to-peer storage solutions such as IPFS or SWARM, and then record metadata such as package checksums, cryptographic signatures, and version history directly on-chain, within dedicated smart contract reachable via publicly known ENS (Ethereum name service) name.

This design not only enables independent verification of downloaded packages, but also creates standard interface to third-party applications, which will have their own package repository smart contract following almost same standard data structures --- with the exception of having both MOD-11 and the third-party developer's signatures in each release.

3-1-3. Pluggable capabilities

Taking the successful experiences from UNIX-based computer systems and infusing it with many web technologies, the adoption of package management in MOD-11 enables pluggable core capabilities of its base system. Beyond simple wallet, digital asset management, and general utility applications such as ENS bidding apps, the project aims to create additional four dApps that expand the core capabilities of platform over time:

1. Eleven Buckets: Fully on-chain decentralized token exchange.
2. Eleven Peers: MOD-11 dApp community engagement forum utilizing IPFS/SWARM
3. Mesh-11: Peer-to-peer off-chain state channel for delegated transactions.
4. Club Badge: Non-fungible, tokenized paid membership ID for MOD-11 ecosystem.

Unlike regular dApps, these four components will introduce new features and activities that can be integrated with many other dApps, as their APIs will be incorporated and supported by the official SDK. For example, we plan to introduce decentralized content addressable storage

[5] Requires app review before being registered and published on the package registry smart contract.

support with the introduction of Eleven Peers, this capability will not be exclusively belong to the dApp, but will instead become reusable APIs in MOD-11 SDK.

3-3. Interconnection and mobile strategies

Peer-to-peer interconnections, as well as proper mechanism designed to disincentivize malicious peer behaviors are the two key approaches for MOD-11 platform to extend the decentralization of Blockchain systems toward off-chain application layers. As additional capabilities released via pluggable extensions to our platform, we will introduce many proof-of-stake like activities to not only motivate full node operation from individual users, but also provides mechanism to discourage faulty behaviors. Figure (b) shows all the currently planned peer-to-peer interconnections when all four major platform upgrades are enabled:

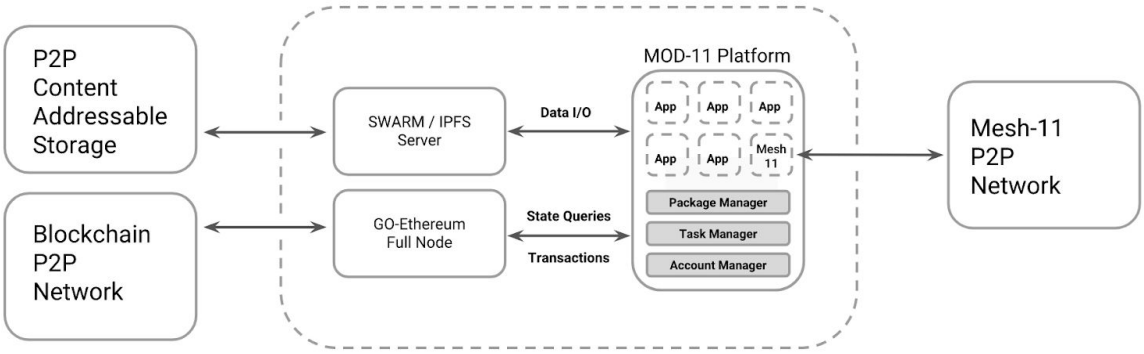

Figure (b)

Many dApp projects lately are created with main focuses on mobile use cases. While the motivation and the market potential is well recognized, we believe that there are currently too much ongoing security uncertainty to just move cryptocurrency wallets directly on mobile platforms. Instead, we want to build dedicated technical stack and solutions for mobile market to ensure reduction of trusted third parties for devices that often have limited bandwidth and computing resources.

Mesh-11 is the result of this vision. By creating a peer-to-peer delegated transaction network[6] across MOD-11 nodes (token staking required) running on various desktop or server computers. Platform participants can voluntarily install and enable Mesh-11 through pluggable system capability upgrade.

As illustrated in Figure (c), Through this peer-to-peer channels, a mobile or “light” desktop client with authorized signature key can then relay signed data over the network with given rewards to incentivize participating delegators to perform actual on-chain transactions using the data. This

[6] custom protocol that extends existing RLPx transport used by Ethereum

solution could also serve customers who are less technical, as well as lowering the entrance barrier for developers to create truly decentralized applications.

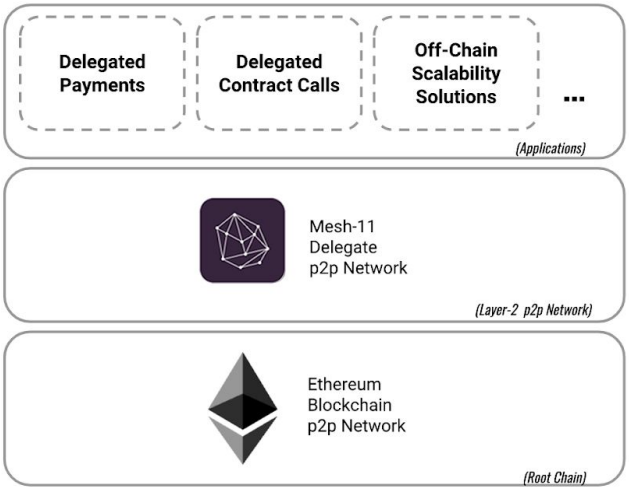

Figure (c)

Mesh-11 not only allows creation of decentralized off-chain state channel with the potential to batch transactions or even Plasma sidechain integration for better scalability, but also enable a safer, lighter weight implementation for MOD-11 mobile or desktop clients. It enables these clients to become a signer only with no balance required, with user funds stored in separated smart contracts. In the event of losing or stolen mobile devices, fund owner can make a smart contract call that revokes the signature authorization of the lost key, keeping it from making any transfers or function calls anymore.

IV. Revenue model

In this chapter, we explain various already implemented or planned dApps that are built utilizing MOD-11 architecture, which are not only served as first batch of dApps bootstrapping the ecosystem, but also expected to generate reasonable revenue stream that covers basic MOD-11 operation. In addition, these dApps are created and designed to work together and form the basis of MOD-11 tokenized economy via their associated tokens.

4-1. **Eleven Buckets**: decentralized token wholesale

With the creation of decentralized applications, it is often accompanied by dedicated token to either become a mean of storing value or to provide unique utilities on their associated dApps. As new class of assets, they are often being compared to other investment vehicles such as securities. Yet we believe that unlike stocks of a company, tokens with dApp reaching its

maturity would require **stable** market price to encourage token circulation that ties to dApp utilization, instead of merely possessing or trading them for financial gain.

One of the essential component that creates "the market" for dApp tokens is cryptocurrency exchange. Recent incidents against conventional, centralized exchanges[15][16] have motivated various attempts to make cryptocurrency exchange decentralized[17]. Yet with many current implementations still relying on web 2.0 infrastructures, the degree of decentralization overall is disappointing.

Utilizing its platform architectural advantage, MOD-11 introduces Eleven Buckets, a fully decentralized on-chain token wholesale. Figure (d) illustrates the smart contracts of Eleven Buckets forming three different market tiers.

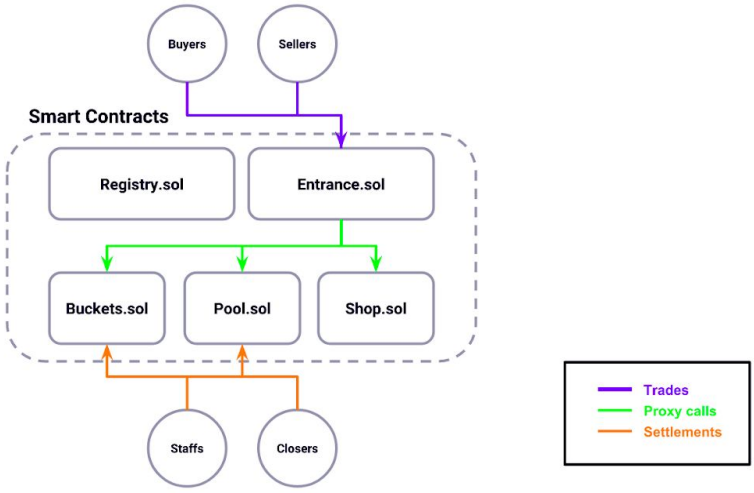

Figure (d)

From simple token shop that addresses dApp token retails for various projects on MOD-11 platform, to the "Buckets" liquidity pool with on-chain clearing house to incentivize independent participants (token staking required) assisting its operation in trustless fashion. Eleven Buckets is created to address both proper decentralization for trading platform that cuts out unnecessary third parties as well as promoting healthy token utilization that binds to dApps usage. The implementation toward this goal is twofold:

(a) In the first stage we plan to list widely-traded tokens with dApps live on main net[7], along with pricing range boundaries defined by fixed deviations from market values ingested by price oracle feeds;

[7] Or the token has real purpose, such as stable coins or asset-backed tokens.

(b) Once there are dApps within MOD-11 ecosystem ready to be launched, we will create new trade pairs with initialized token prices based on exchange operational cost as well as targeted token prices specifically for the dApp and deduce pricing boundaries accordingly.

By creating transparent pricing standard similar to Manufacturer Suggested Retail Price (MSRP) for ready to use dApp tokens, we are aiming a paradigm shift to promote real apps with tokens as part of the product, in the hope of advocating real value of Blockchain-based economy that is not merely speculations. This is ultimately to create sustainable ecosystem.

4-2. **Club Badge**: non-fungible ID for MOD-11 (planned)

Some people have predicted that 2018 will be the year of non-fungible tokenized assets[18]. While we certainly recognize the technical advantage used for digital collectables, we want to explore the potential of non-fungible tokens beyond collectable assets. It is currently planned to create non-fungible tokens utilizing ERC-721 standard that functions as member ID which offers extra benefits within MOD-11 ecosystems. Beyond MOD-11 membership, this project can expose standard API through our SDK that enable dApp developers to utilize same infrastructure for their own paid membership ID. It is also planned to upgrade Eleven Buckets token retail to support ERC-721 trading.

4-3. **Mesh 11**: delegated transaction network (planned)

As mentioned earlier, the delegated transactions via MOD-11 peer-to-peer network is planned to be a technical solution of our mobile strategy. Based on ERC-865 standards, which enables token transactions on Ethereum network without paying gas fee in Ether (paid in token instead), the standard can be expanded to enable delegate Ether transaction (via WETH) or even incentivize delegated smart contract calls.

Our intent is to create all building blocks that facilitate this standard throughout MOD-11 ecosystem. As all delegating functions are incentivized (token staking required), it creates extra motivation for users to maintain MOD-11 nodes that are constantly connected to jointly form peer-to-peer off-chain state channel network for transactions, where they become part of the core service layer that make possible for MOD-11 to develop our mobile or “light” dApp clients. This open network can eventually be adopted and benefit entire Ethereum community.

In terms of revenue aspects of Mesh 11, in addition to utilize it for new dApps on mobile platforms that generate additional cash flow for the company, we are also planning to offer API and integration consulting services to work with third-party app developers within or outside MOD-11 ecosystem for a recurring annual fee which we share with all participating delegates.

V. Token economics

Since the architectural design of MOD-11 orienting individual full node operation, one of the key mechanism towards successful platform establishment is to motivate such operation with rewards. Among all possible different approaches, we believe that proof-of-stake dApp activities with incentives provide both good motivation for node participation as well as economic mechanism that discourage misbehaviors on the platform through properly designed penalty conditions.

Due to the nature of staking activities, the collaterals of choice has to have actual value association to create proper economic mechanism. As a platform with specific focus and dedication, while utilizing Ether as stakes is still feasible in some cases, it does not ensure participants being fully aware and appreciated the design philosophy associated to the staking activities. From this regards, it is ideal to have dedicated token for the dApp.

Nevertheless, releasing tokens through initial coin offerings (ICO) often creates various ethical issues and concerns over token liquidity. Beyond raising funds that bootstrap the operation of the company through Simple Agreement for Future Tokens (SAFT), the core dApps of MOD-11 are designed with two specific activities when involving tokens: first is the *laboring activity* which involves new token minting to reward participants for specific dApp interaction, the second is the *staking activity* that becomes available to those who has earned enough token stakes. The latter leads to additional reward paid by the network as service fee when the required duties are performed properly by the staking participants.

In this chapter, we will explain various plans for our DAO token distribution via SAFT, as well as the relationship of this token with other utility tokens associated to the core dApps of MOD-11 platform.

5-1. MOD-11 DAO Token

As stated previously, the DAO token of MOD-11 will be distributed via Simple Agreement for Future Tokens, or SAFT. This DAO token will serve as foundation for both decision making and value appreciation mechanism across the entire MOD-11 ecosystem. In addition to be used for community votings which decide key roadmaps of the ecosystem, the token will also be used for what we called **“Initial Token Swap” (ITS)** process, which will be explained below.

Throughout the planned MOD-11 project developments, with the introduction of each core dApp described in chapter III, there will also be creation of their own dApp tokens. Instead of having to hold separated token distribution events for them, tokens of these core dApps will have dedicated portion to be distributed by initial token swap event using MOD-11 DAO token under

fixed swapping rate. Once swapped, the DAO token will be locked inside the swapping smart contract for a fixed amount of time (about 18 months) before they can be optionally swapped back using same swapping rate. After certain time, the DAO token that are not swapped back will be burned.

This approach enables separated utility token distribution **without raising extra fund**. It also benefits our DAO token holders by offering exclusive rights to swap for new tokens. The swap event not only promotes new dApp among community members, but also can be viewed as an approval voting of new dApp on the platform. The fact that we preserve rights to unswap the token at a later time greatly reduce the risk for our DAO token holders. Since each of our new dApp token will have natural minting process associated with specific laboring activities as stated in previous section, the swap event is mainly served as initial economy bootstrapping mechanism of the new token within our community.

Another benefit of ITS event is to use the swap rate at the event plus our DAO token market value at the time to deduce a fixed token price in Ether for the new dApp token. This price can then be used to determine the token trade pricing boundaries on Eleven Buckets, the decentralized token wholesale of MOD-11 platform. The same price can also be adopted for optional community token sale after initial swap event.

If token community sale is deem necessary in addition to the ITS event, any MOD-11 Club Badge (paid membership) member that holds registered (KYC) NFT ID token before certain block height will be eligible to participate the sale, which will have limited amount available per member using the same fixed price deduced above. After these events, the rest of the dApp token, ideally remain over 60% of total amount, will only be mintable via the laboring or staking activities associated to the dApp, as described in previous section.

The rest of this chapter will walk through all the currently planned core dApp tokens with the specific details regarding their initial token swap events.

5-2. Buck token for Eleven Buckets

Eleven Bucket (or 11BE in short) is the dedicated decentralized token wholesale for MOD-11 ecosystem which comes with unique staking process. When any token supplier sold out an order[8] on 11BE Bucket token pool, after settlement by clearing house, the account will be issued with specific amount of BUCK tokens along with the earned Ether during withdraw.

Additional rights and duties of participating clearing house operations are granted by 11BE Bucket smart contract when an account has accumulated enough BUCK stakes. The stake will allow the account to register and participate clearing house operation and earn the maker fee of

[8] 11BE platform has minimum sell order size, which is tokens worth of one Ether at current bucket price.

the trade in Ether. Note that along with successful registration, the BUCK tokens will be returned to token pool held by the platform for reissurence.

The stake requirement for clearing house registration creates an effort that needs to be achieved before an account is granted with access to the clearing operation[9], with the exception of BUCK tokens distributed in ITS event which allow bootstrapping the clearing house operation by the devoted MOD-11 DAO token holders. The Ether incentives (maker fee) issued during closing operations will be proportional to how effectively the operation is carried out. Finally, the token *cannot* be used as any form of payment nor tradable on 11BE platform.

To bootstrap the Bucket token pool clearing house operation, the BUCK initial token swap event is currently planned to enable up to 30% of BUCK token for swap at the fixed exchange rate of 1:1000 after the trading platform has successfully tested on public test net. The MOD-11 DAO token collected during the swap event will be locked for 18 months in the swapping contract. The rest 70% of BUCK tokens will be gradually released through the usage of 11BE Bucket token pool for tradings as described in chapter 4.

5-3. Mesh token for Mesh-11

Mesh-11 provides the peer-to-peer off-chain infrastructure at the core of the mobile strategy of MOD-11, and can take one step further to integrate various layer 2 scalability solutions that help address the TPS (transactions per second) limitation of Ethereum mainnet. Regardless for the purpose of decentralized off-chain state channel for delegate transactions, or evolving into full fledged Plasma sidechain solution, proof-of-stake activities through various smart contracts is essential to its success.

The staking process of Mesh-11 requires delegates to hold Mesh tokens beyond certain threshold in order to become a delegate. Upon registration the delegate can also set a fee rate for delegate services. The adjustment range of fee rates are proportional to the staking size beyond the minimal threshold, which can also be staked with other core dApp tokens of MOD-11 platform or simply using Ether as stakes.

The initial token swap for Mesh-11 will also have similar offers as the BUCK token: 30% of total token circulation will be available for MOD-11 DAO token holders to swap at the rate of 1:1000. The collected DAO token will also be locked for 18 months before being burned or swap back at the same rate. It is currently planned to also hold a community sale allowing Club Badge NFT token holders with KYC registration to participate.

[9] Either by selling enough orders on the platform or purchase from somewhere else. The latter is less likely since tokens will be taken upon registration.

Up to 10% of Mesh tokens will be offered for community sale via dedicated token shop on Eleven Buckets at the price calculated from the ITS conversion rate using the market value of DAO token at the time of event. The rest 60% of Mesh token will only be minted as staking rewards, which will be gradually distributed among all the proof-of-stake participants as extra incentives in addition to the fee collected via delegate transactions.

5-4. Badge token (NFT) for Club Badge

Instead of being an ERC20 token for staking activities, Badge tokens from MOD-11 Club Badge are non-fungible tokens used as paid membership identifications (ID) which associates the unique hash of each non-fungible token to an internal mapping of KYC information of its holder. The token and its holder becomes “registered” upon finishing the KYC process. The token can be purchased unregistered and then to be used for identifications of any third-party dApp with similar paid membership design.

Many ecosystem or platform activities, such as ITS events or various staking activities of MOD-11 core dApps, will require valid Club Badge membership with registered KYC info in order to be eligible to participate. Due to its nature, the Badge token will not need to have an ITS event of its own and will only be purchasable using Ether at a fixed price (in addition to any applicable KYC fees) via the NFT minting contract.

5-5. Peer token for Eleven Peers

PEER token is an attempt to create longer-term governance mechanism that aims to gradually decouple on-chain governance from using any token created for fundraising purposes. Instead we want to infuse social activities with PEER token issuance in order to naturally give the people who cares more about the MOD-11 communities and ecosystem with more voting weight.

As a result, **the PEER tokens are not for sale**. Instead, a fix amount will be issued to every newly registered (KYC) Club Badge member. Eleven Peers, the dedicated dApp associated to this token will include self-hosted decentralized blog platform as well as chat room, both powered by IPFS/OrbitDB, where various activities can use PEER token as “tip” between two individuals. MOD-11 will also periodically reward people receiving tips with matched amount of PEER.

Note that this form of tipping is not transfering “money” but voting weight. As our current plan, any agendas that are not directly impacting the financial condition or operation of MOD-11 would be voted using PEER token instead of our DAO token. We also plan to hold token swap event to convert DAO tokens to PEER tokens with accompanied token airdrop to complete transition of the governance power out of the original DAO token created via SAFT.

VI. Roadmap

In this chapter we briefly explain the planned steps toward realization of MOD-11 ecosystem, as shown in Figure (e). At the moment we are still seeking for seed round investment, once the initial fund is secured, we will provide updated roadmap with estimated time schedule associated to the activities.

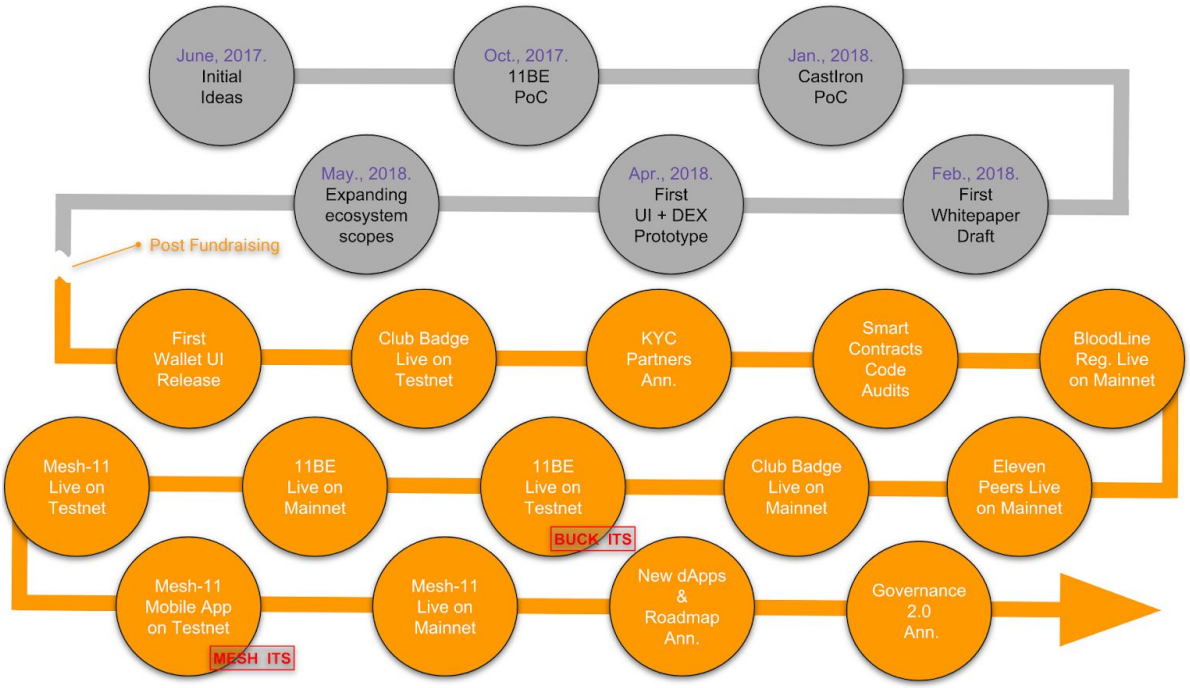

Figure (e)

Note that the dApps described in this paper is merely a beginning, after their successful deployments, we will be releasing plans and roadmaps of our next phase of dApps and ecosystem developments. Additional tokens associated to these new dApps will also be distributed via ITS events. Through this repeating development cycles, MOD-11 can gradually stand up on its own feet with incomes generated from various dApps, at the same time diffusing its original DAO token holdings by transforming them into actual tokens associated to various dApps.

VII. References

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