

spl.yt Decentralized e-Commerce

“deCommerce” and Shared Ownership Platform

A White Paper Primer

Introduction

Spl.yt will be an open source platform that makes it easier for people to buy, sell, and share ownership of anything online. By connecting to the spl.yt suite of smart contract on the blockchain, marketplaces pool resources to increase their market presence and value to customers. All listings using spl.yt are automatically populated into each other’s marketplace. With a decentralized listing database, buyers and sellers only need to post or search for items on one marketplace to accomplish what would have taken many visits to do so before. Marketplaces can also use spl.yt to offer shared ownership purchases and management that make it easier for consumers to afford otherwise unattainable luxury assets, thereby increasing the potential market for those items.

Spl.yt Summary

Spl.yt aims to facilitate decentralized eCommerce (“deCommerce”) using Ethereum blockchain smart contracts and immutable shared data to make it easier for people to buy, sell, collectively own (fractional ownership) and manage anything. This objective will be facilitated by developing two components: (1) the spl.yt core smart contract listing architecture and (2) the deCommerce economy. The former serves as the technical foundation of the latter, and both components will be powered through spl.yt access tokens (SATs). These individualized, unique tokens will permit third party platforms to join the spl.yt deCommerce economy.

Spl.yt Access Token

SATs are the financial unit through which certain behaviors are incentivized in order to facilitate the spl.yt economy. The primary function of SATs is to serve as an artificial barrier built into spl.yt core to provide incentives against spamming behavior in the decentralized listing database (see below), though it will also be used as an incentive for applications to work together to create spl.yt's deCommerce environment as well as for the exchange of goods and services offered on any of those platforms. SATs represent the total value of the spl.yt's deCommerce market. SATs are preferable as a distinct medium of exchange from ETH to allow each to independently appreciate or depreciate in value, similar to how it is desirable to buy gas, bread, and stocks with US dollars so that each can fluctuate in price or value without directly affecting the others' markets.

Spl.yt Core

Spl.yt core is an open-sourced B2B deCommerce architecture through which other developers or third party applications can "plug into" this network to take advantage of the power of the Ethereum smart contracts. Applications who utilize spl.yt core can take advantage of the network provided by the spl.yt economy in a unified effort to transform social understandings of how people can use the internet to buy, sell, and own property. Spl.yt core will be developed and managed by the spl.yt Foundation, a nonpartisan, non-profit entity charged with meeting the needs of eCommerce applications who utilize its features. Spl.yt core boasts the following capabilities to help eCommerce applications better help users buy, sell, and manage goods using their services:

- *Decentralized listing base* - Multiple websites/platforms can utilize and contribute to a common listing base, competing instead on other business differentiators such as shipping prices, services, specialized

competence, etc. For example, if Amazon, eBay, and textbooks.com were all built on spl.yt core, sellers of textbooks would only have to list their textbook once on one platform and it would automatically populate the others. Conversely, a purchaser of textbooks would only need to purchase from one website, and the item would automatically de-list from the others. SATs must be spent¹ in order to create a listing in the decentralized listing base to prevent spamming useless or low-interest listings. Basically, anyone who wants to create a spl.yt listing must be committed enough to buying or selling an item to be willing to spend a nominal fee to do so.

- *Listing originator kickbacks* – Applications who facilitate listing items in the decentralized listing base (“listing originators”) may be concerned that other platforms will keep the proceeds if they manage to sell those items first. Kickback incentives are hard-coded into the spl.yt core framework to ensure listing originators are rewarded for facilitating or contributing listings to the shared listing base. Thus, free-loader problems are eliminated while grassroots affiliated marketing behaviors are encouraged.
- *DAO Fractional Asset Management* - For items where DAO governance is reasonable, spl.yt listing contracts can be programmed to automatically spawn DAOs for collective asset management. For example, collectives can set decision-making parameters in order to select service providers to maintain assets, assign individual usage rights of collectively owned property, or enter smart contract agreements as a group with service providers. This feature is optimal for fractionally owned assets, creating and managing investment pools in various types of assets, or

¹ Tokens spent to list items will be converted to ETH using a decentralized exchange product such as Project 0x, EtherDelta or Ripple to pay the gas fees necessary to execute smart contracts on the Ethereum network. These fees can also be autonomously distributed among SAT holders as a profit-sharing incentive to purchase and hold SATs, though the legal and economic contexts of whether this function is practical must still be explored.

creating community jurisdictions to obtain and manage social property like parks or roads.

- *Spl.yt Developer Kits (SDKs)* - We are developing out-of-the-box API solutions and instructions to help ecommerce applications of any competence level easily connect with spl.yt's blockchain ecosystem.
- *APIs* – The spl.yt foundation is developing and documenting APIs to allow any application to easily integrate the split core features.

Executive Summary

1. Intro/Executive Summary

"I could absolutely imagine a decentralized Amazon. We've seen the pieces. They're not all connected to one another. They're not all but out or remotely mature, but I could imagine an open platform of many different actors with different roles."

– Joseph Lubin, CEO ConsenSys Systems

The global retail eCommerce industry's revenue reached nearly \$1.95T^[1]² in 2016 and is projected to grow to nearly \$4T by 2020.³ In the United States ("US") alone, eCommerce is expected to reach \$452.76B in 2017, accounting for 9% of total retail sales. One trend is clear: eCommerce is fundamentally transforming how we buy, sell, and own things, and will continue to pervasively affect the retail industry over the foreseeable future.

² All monetary figures indicated in the currency symbol "\$" refer to US Dollars.

³ <https://www.emarketer.com/Article/Worldwide-Retail-Ecommerce-Sales-Will-Reach-1915-Trillion-This-Year/1014369>

But while eCommerce increasingly makes it easier for consumer to accumulate assets without the need for a “brick-and-mortar” store-front, an oligopolistic pattern is emerging of firms that control the eCommerce market. The top ten companies in the US eCommerce space account for \$290B.⁴ Amazon alone controls up to 44% of the market in 2017 (up from 38% in 2016), with the next three companies controlling an additional 14.2% (eBay 6.8%, Apple 3.6%, and Walmart 3.6%).⁵ These companies leverage a strong marketing presence and operational infrastructure to prevent any single newcomer from threatening their dominance of the eCommerce space.

Spl.yt believes the same factors that solidify these companies’ dominance also leads to systemic bottlenecks that reduce user satisfaction, healthy competition and unnecessarily limit efficient consumption of goods and services. For example, users who sell products online frequently complain about difficulties in tracking and managing their inventories across multiple platforms⁶. In another example, user-behavior conditioned to using platforms like Amazon and eBay out of convenience drives a feedback loop where newcomers who offer better or niche-interest services struggle to attract buyers and sellers at a price point competitive to the entrenched larger players. These forces lead to market segmentation where only consumers of higher income levels or technical proficiency (and patience) can purchase certain products and services. Ultimately, this reduces efficient use of consumable resources and limits innovative products’ ability to reach sustainable market share.

Spl.yt recognizes two complementary technological innovations that can alleviate these pressures: “open-source” technical development and

⁴ <https://www.emarketer.com/Report/US-Ecommerce-Sales-2017-Top-10-Companies/2002164>

⁵ <https://www.emarketer.com/Report/US-Ecommerce-Sales-2017-Top-10-Companies/2002164>

⁶ <http://www.ecommercebytes.com/C/abblog/blog.pl/?pl/2013/7/1373407108.html>

“token economies” facilitated by blockchain-powered smart contract infrastructure. Open-source technology alleviates the need for companies to build a strong internal technical competence by allowing anyone to contribute to or utilize code to perform certain functions. This could allow companies who leverage the power of open-source to free up resources for other aspects of their business, such as marketing, business development, and innovation. Token economies create economic incentives for businesses to share resources (such as information or processing power) with otherwise unknown or untrusted parties.

Indeed, spl.yt aims to utilize token economies to eliminate the largest problem that has historically plagued open-source projects: financing and economic incentives⁷. Open-source projects are traditionally facilitated by non-profit organizations that often lack the resources to consistently improve or maintain their products, causing lower-than-expected adoption rate and technical failures that harm viability at an enterprise level. While open-source foundations spend resources in development and coordination of their products, other entities are free to implement and utilize those products without necessarily contributing an optimum amount back to the project—often to the secondary entities’ own (and, consequently, users’) peril.

Spl.yt seeks to demonstrate that the combination of these technologies can be used to alleviate the problems in the eCommerce industry identified above. The project’s goals are to provide publicly available solutions that resolve frictions in the eCommerce industry that create oligopolistic environments, acting as an overseer for coordinating and incentivizing market places to build on and contribute to a new

⁷ Stallman, Richard (11 March 2012). Richard Stallman (S20E10) (Podcast). The Linux Action Show. Jupiter Broadcasting. Event occurs at 0:53:46. Retrieved 18 June 2016. I'm not going to claim that I got a way to make it easier to raise money to pay people who write free software. We all know, that to some extent there are ways to do that, but we all know that they are limited, they are not as broad as we would like.”

“decentralized commerce” movement (“deCommerce”). All products will require using “spl.yt access tokens” (SATs), which are circulated throughout the spl.yt economy and provide incentives aligned with promoting the deCommerce movement. By distributing SATs to the community, through a series of well-planned pre-sales tied to strategically determined milestones – while utilizing thorough compliance and business decision making – spl.yt hopes to prove show that building economic ecosystems and properly managing communities allows open-sourced efforts to avoid common pitfalls that have hindered other past projects.

Spl.yt already has completed an alpha minimal viable product in the form of two smart contract-enabled features: a shared, decentralized listing database, and a protocol through which users can collectively purchase and manage assets. Marketplaces who utilize one or both of these features can assure users that (respectively): (1) their inventories are competitively stocked and that they do not need to explore multiple marketplaces to find the correct item for the lowest price, and (2) they can intelligently acquire, share, and use goods, services, or experiences that might have been outside their budgets in legacy systems. SATs are used to incentivize behaviors by all parties involved to ensure the system’s success and increase adoption.

We encourage believers in this vision of a shopping experience powered by deCommerce will participate in spl.yt’s token distributions, we also encourage participation in our social media communities, our open-sourced development repositories, and outreach efforts. The rest of this White Paper details how we currently intend to manifest this vision, and the technical infrastructures of spl.yt’s developed products.