An incentivized search platform for searching vendors by reputation

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Abstract

We describe Chlu Search, a platform for searching businesses and service providers ranked by their reputation. The aggregation of ratings and reviews accumulated by vendors over their lifetime defines their reputation. Currently it is impossible to find vendors ranked by their reputation across multiple marketplaces. Fake reviews and walled gardens don't allow searching for vendors across marketplaces. Chlu Search, supported by the Chlu reputation platform solves this problem. The Chlu reputation platform, described in a separate document, captures vendor reputation so that anyone can validate the authenticity of reputation data without depending on a trusted third party and without locking the reputation data inside a walled garden. The Chlu Search platform, described here, builds on top of the Chlu reputation platform and incentivizes vendor and customer participation by granting Chlu Search Tokens for writing reviews and accepting payments. The same token is also used by vendors to purhase advertising space on Chlu Search. Finally, we specify the Chlu initial token generation event and the distribution of token across the founding team, investors and future generation of tokens that provides the incentives for vendor and customer participation.

1 Introduction

If a customer wants to search for a vendor that provides a specific product of service, the customer has no choice but to repeat the search on multiple marketplaces and try to correlate the various ratings and reviews on those different marketplaces to try and select a vendor. The situation is such because marketplaces lock down vendor reputation data into walled gardens owned by the marketpalce. For example, eBay, Amazon and Alibaba reputation of the same vendor have no correlation. Multiple solution have been tried on web 2.0 by Yelp, TripAdvisor and similar platforms, to try and provide a means for customers to search for vendors in an easy manner. However, these platforms are prone to fake reviews as the reviews on these platforms are not backed by proof of a purchase made by the customer. Vendors can hire fake review writers and this results in an arms race between the review platforms and the fake review providers.

The Chlu reputation platform[**?**] describes a solution that addresses the problem of fake reviews and allows vendors to control their reputation data which breaks them free from the marketplace owned walled gardens.

In this document, we describe Chlu Search, a platform that provides a means to search the reputation data generated by the Chlu reputation platform. The Chlu Search platform also enables incentives for vendors to accept payments and reviews through Chlu, and or customers to write reviews using Chlu.

Chlu Search can only enable searching for vendors who share their reputation data with Chlu, and that is why the incentives for vendors are important. The same is true for customers, writing reviews is often ignored by customers, but by offering incentives Chlu Search drives the adoption of Chlu reputation platform.

This synergy between Chlu Search and Chlu reputation platform is important for the ecosystem to accomplish its goals. The vendor owned reputation data enables a future where marketplaces can't lock in vendors inside their walled gardens and the problem of fake reviews is addressed. Meanwhile, the incentives provided by Chlu Search further drive adoption of Chlu reputation platform resulting in bigger data set for Chlu Search to provide search for.

2 Chlu Search

Chlu Search enables customers to search for a potential vendor in a domain without having to repeat the searches om multiple marketplaces and then doing the often frustrating work of drawing parallels between the diverse ratings systems used by the marketplaces.

Chlu Search ranks vendors by the aggregate ratings and reviews received by vendors that are supported by validatable payments. The search results therefore are based only on the ratings, 1 to 5, and the amounts paid. There are other improvements possible, for example using a half life on the ratings - older ratings contribute lower scores to the vendor's rank.

The goals of Chlu Search can defined as:

Search by ratings Provide a means to search for vendors based on ratings received after a sale

ngs backed by payments If there is no sale, the rating is considered invalid and not included in the search rank calculation

dency from marketplaces Let vendors break free from the walled gardens of marketplaces, so that they can chose to start selling on any marketplace and even move from one to the other.

Chlu search is a centralised service and is not built on blockchain or a smart contract. Search doesn't need to be decentralised. However, the data that Chlu Search is built on is stored on a decentralised storage network, IPFS. The reputation data provided by Chlu reputation platform is stored on IPFS and completely under the vendor's control. Chlu Search requires that the vendor is incentivized to share this data with. In the next section we introduce the Chlu Search Token and show how it is used to provide vendors with appropriate incentive.

Chlu Search also needs that the Chlu reputation platform receives ratings data from customers. In traditional ratings systems, customers are not given much of an incentive to create a review. Chlu Search creates an incentive for the customers to create a review by using the Chlu Search Token as a reward.

3 Chlu Search Token

As described above the Chlu Search Token serves the important function of incentivizing the vendor and the customer so that there is data generated for Chlu Search to be relevant and there are enough vendors listed on Chlu Search. In this section, we describe the various uses of the Chlu Search Token and provide the initial details of the Chlu Search Token economy.

3.1 Incentivize creating reviews with Chlu

Chlu Search rewards customers who create reviews on the Chlu reputation platform. The reward is in the form of Chlu Search Tokens that can be converted to other cryptocurrencies.

The only requirements to earn such rewards is that

1. The customer is registered to receieve the reward and
2. The vendor is sharing the ratings data with Chlu Search

The first requirement is not required apriori. In stead, the customer can make payments and leave ratings for a vendor and come back much later to collect the reward for the work. As soon as a customer registers with Chlu and proves they are the authors of their ratings and reviews, the customer is rewarded with Chlu Search Tokens as per the specification described later.

[TODO - change Chlu reputation protocol so that customer reviews are created under their IPNS directory]

To prove that a customer is the author of reviews, the customer wallet creates a validation signature in the IPNS directory where the reviews are saved. By registering with Chlu and proving their authorship of the reviews, customers can receive reward Chlu Search Tokens in an asynchronous manner.

The second requirement listed above states that if the vendor is not sharing the ratings data with Chlu Search, the customer will not be rewarded for leaving the review. Chlu wallets can explicitly communicate this information to the customer, so that the customer is aware if they

will receive a reward for leaving a review. Customers might even chose to not do business with a vendor who is not sharing their reputation data with Chlu simply because the customer wants to recieve the reward of Chlu Search Tokens.

3.2 Incentivizing Adoption

Chlu Search rewards both the customer and the vendor to participate in the Chlu economy.

1. The customer is rewarded for writing reviews
2. The vendor is rewarded for sharing their ratings data with Chlu Search

With the right schedule of rewards we want to drive adoption of both the Chlu reputation platform and Chlu Search. At the same time, allowing vendors to control their own reputation data and not being confined inside a walled garden run by a marketplace or a ratings platform.

Up till now we have described how the Chlu Search Token is generated as a reward to be given to vendors and customers. In the next section we describe how the Chlu Search Token is consumed in the Chlu economy.

3.3 Pay for advertising on Chlu Search

Vendors are allowed to advertise within the Chlu Search platform. So a plumber in New York can purchase ad space, essentially bumping his profile to the top of the search results by spending Chlu Search Tokens. These spent Chlu Search Tokens are transferred to Chlu, the company running the Chlu Search Token.

[TODO - Describe precisely when generation stops, and what are the generation schedules and later the rewards schedule based on ad spends]

Once all the Chlu Search Tokens have been generated by the reward generation

4 Chlu Token Economy

- Token cap - Rate of token generation - Token distribution

5 Conclusion

References

[1] Benet, Juan *IPFS - Content Addressed, Versioned, P2P File System*. 2014. https://github.com/ipfs/papers/raw/master/ipfs-cap2pfs/ipfs-p2p-file-system.pdf

[2] *Decentralized Reputation in OpenBazaar* https://blog.openbazaar.org/decentralized-reputation-in-openbazaar

[3] *Ethlance - hire or work for Ether cryptocurrency* https://ethlance.com

[4] *A collective of decentralized marketplaces and communities* https://district0x.io/docs/district0x-whitepaper.pdf

[5] *Colony* https://colony.io

[6] *Monetha* https://www.monetha.io/static/media/Monetha_White_Paper.72d6c2dc.pdf