

The Decentralized Search Engine

www.presearch.io

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Abstract

The Internet connects more than half of humanity and is reshaping industry, society and government at an unprecedented pace.

While most users are happy with the current state of the Internet due to the proliferation of ‘free’ services that enable them to research, share, transact and communicate, just a handful of these services are responsible for the vast majority of usage.

Never before have so few organizations controlled the information flow for so many people.

While this is problematic, at least with services like Facebook, LinkedIn and Twitter, users know they are dealing in a walled garden and do not expect impartiality and neutrality in their experience.

However, in the case of Google, due to their origin as an academic project, friendly branding and ‘don’t be evil’ mantra, users have been lead to believe that Google is a neutral resource that simply guides them to the most appropriate answers that are chosen automatically by a genius algorithm. They expect honest answers and have a hard time believing that Google’s results could be self-serving or worse, detrimental to the searcher.

As Google has become a multi-billion dollar business that answers to Wall Street, their ethos seems to have shifted from the early days people remember them by. They have become known for promoting their own properties at the expense of alternatives¹, appropriating others’ info² and operating in secrecy³, all of which is blamed on ‘the algorithm’. The reality is that they manually manipulate results⁴ while hiding behind their algorithm and justifying all changes as being ‘best for the user’. It’s not an ideal environment.

Search is the gateway to the web. The world deserves an alternative search engine that is open, transparent, and that involves the community in product development, consensus and quality control.

Presearch is building this open, decentralized search engine. We clearly set the ground rules and user expectations up front, and never deviate from our community constitution.

Presearch is a ground up, community movement, similar to Wikipedia. Human curation is an important strategy that is combined with scalable machine learning approaches. This curation and overall development of the platform is incentivized with PST (Presearch Token) exchangeable tokens that reward participants’ efforts.

In the beta release, which is more of a search *tool* than a search *engine*, the user is able to choose which engine they search from the Presearch interface. Google is the default option, minimizing switching costs for the majority of users who already use Google. Users are exposed to alternative engines, including DuckDuckGo, social search engines, domain WHOIS engines and more.

Presearch funds operations through a transparent, unobtrusive advertising system that enables advertisers to bid on keywords and sponsor results. In version one, relevant ads are displayed within the search field auto-suggest results. Ads are purchased using PSTs via auction, driving usage within the ecosystem.

¹ <http://www.cnbc.com/2017/06/27/eu-hits-google-with-a-record-antitrust-fine-of-2-point-7-billion.html>

² <https://www.theguardian.com/technology/2015/mar/20/google-illegally-took-content-from-amazon-yelp-tripadvisor-ftc-report>

³ <https://www.inc.com/jeff-bercovici/google-culture-secrecy.html>

⁴ <https://www.forbes.com/sites/jaysondemers/2014/06/16/the-definitive-guide-to-google-manual-actions-and-penalties/#3b6427dbe5d0>

Background

The Internet

The Internet is one of humanity's crowning achievements.

In less than 30 years, the Internet has transformed the global economy from industrial to information-based, while altering almost every facet of social life at the same time.

With half of the global population now online, the Internet is the link that binds people together, enabling them to research, share, transact and communicate instantly and directly.

The promise of this incredible medium appears to have been met thanks to services like Google, YouTube, Facebook, Twitter, LinkedIn and Amazon, the market leaders who dominate each of their respective categories.

There's no denying that these services provide incredible value to the world, but the fact that so many of our online activities are monopolized by so few companies is alarming.

The Internet was created to be a distributed and decentralized platform that we could all build upon, but what we've ended up with is a series of walled gardens that extract huge revenues and profits from the users who participate in their increasingly-closed ecosystems, with very little ability to influence the direction of the platform, and with little to no transparency.

While most of these services originated as 'closed' systems in which users have consciously chosen to participate, and with no real expectation of neutrality or impartiality, one Internet giant stands out for its academic roots and brand built upon being an arbiter of objective truth.

That entity, of course, is Google. The quirky Stanford project sought to organize the world's information, making it 'universally accessible and useful', and captivated the world's attention and our searches by being better than other search engines of the time. And, with its 'do no evil' mantra, Google built an unprecedented degree of trust with users.

Their simple interfaces, lightning-fast response times and utter reliability, combined with what appear to be amazingly accurate results, have led to Google obtaining 77% of global desktop searches⁵ and 96% of mobile searches⁶ - more than 5 billion queries per day⁷ - and generating almost \$100 billion⁸ in annual revenue.

⁵ <https://www.netmarketshare.com/search-engine-market-share.aspx?qprid=4&qpcustommd=0>

⁶ <https://www.netmarketshare.com/search-engine-market-share.aspx?qprid=4&qpcustommd=1>

⁷ <http://searchengineland.com/google-now-handles-2-999-trillion-searches-per-year-250247>

⁸ <https://www.statista.com/statistics/266206/googles-annual-global-revenue/>

But what if Google's success comes at a hidden cost to humanity, one that continues to increase with each passing year? And what if Google isn't as impartial as everyone believes?

Before we explore Google's practices through a critical lens and propose solutions, let's first review the role of search engines on the Internet.

Search - The Gateway

There are 3 primary ways that people access online information:

1. Direct
 - a. Generally by typing in a URL
 - b. Using a browser address bar historically
 - c. For known information and brands
 - d. Primary channel value is quick access
2. Referral
 - a. Generally by clicking on a link
 - b. Via another channel - social media, website, email, etc.
 - c. For unknown information and brands
 - d. Primary channel value is discovery - accessing information you don't know about, and didn't know you wanted
3. Search
 - a. Entering a query into a search engine and choosing a result
 - b. Done via search engine website and via browser search fields
 - c. For known needs, unknown information and unknown brands
 - d. Primary channel value is solving a pain point and accessing the best result quickly

Direct traffic to known information and brands involves a high degree of user trust, but because the content is known, this channel acts least as a gateway.

Referral links to content through various channels are meaningful and plentiful, and due to the breadth of those channels, even in the age of Facebook, there is no single gateway. Blogs, Twitter, Instagram, YouTube and other channels provide many ways to discover unknown content and brands. Users do not have any expectation of impartiality or relevance, and assume responsibility for their content access, thus trust is low. Low trust and unknown content reduce the potential for a gateway.

Because search engines help people answer specific needs at a moment in time, they are directional in nature, pointing people in the direction of the resources that can help them answer a question or solve a need. Users expect impartiality, relevance and quality. Trust is high due to these expectations, and when coupled with unknown information, the potential for a gateway is high and standards of transparency should therefore also be high.

It is interesting to note that due to the meshing of the search and URL address bars in browsers, the direct channel is being disintermediated by search, increasing the power of the gateway even further.

Search Engines - The Gatekeepers

If the Internet is the Information Superhighway, search engines are the on-ramps.

While there are a number of alternative search engines, Yahoo / Bing and Baidu being the largest, and a number of smaller engines such as DuckDuckGo, YaCy (peer 2 peer), Gigablast and others, there is little usage and innovation (except maybe DuckDuckGo), and Google dominates search.

Currently for 77% of all trips onto this highway, everyone is squeezing through a single ramp. This extreme degree of centralization has had two main negative effects:

1. The 'stops' along the highway: content producers, webmasters, marketers and businesses, organizations, etc., are all extremely crowded alongside that ramp, fighting to be seen, paying more than \$50 billion per year for scraps of attention.
2. Those who control the single on-ramp are in a position of extreme power and privilege as the directors of traffic, and have the ability to increasingly lock in their position, ensuring their ultimate long-term dominance.

Having one company in this position of extreme power is particularly troublesome because it enables them to operate in a very opaque, top-down, almost-oligarchical manner.

With great power comes great responsibility; a responsible gatekeeper would recognize the need to be continually more accountable, open and provably fair.

Unfortunately, Google appears to be abdicating their responsibility as the primary gatekeeper of the Internet by becoming increasingly secretive⁹ and taking few steps¹⁰ to become more transparent¹¹, despite having more than 15 years as the dominant search engine and billions of dollars in capital.

They default to 'just trust us' messaging in place of processes, information and communication and hide behind their algorithm, justifying their secrecy by blaming hackers and spammers who would take advantage of any information they share.

While there is some truth to this, and we recognize that Google is in a different position than many businesses, they also have a vested interest in not developing better processes to prevent gaming of the system, and their automated algorithms are actually supplemented by human reviewers, which negates many of the claims that they are hampered by technology and must remain secretive to protect the quality of their results.

⁹ <http://www.businessinsider.com/google-culture-secrecy-employee-lawsuit-spying-program-novel-2016-12>

¹⁰ <https://www.wired.com/2009/12/google-talks-out-its-portal/>

¹¹ techdirt.com/articles/20161021/17382035854/googles-quiet-confusing-privacy-policy-change-is-why-we-need-more-transparency-control

Current Search Engine Technology

There are a number of key components involved in generating results as relevant as Google's. This is a simplified overview of those services:

1. Web crawler
 - a. An automated program that scans through web pages and documents all over the Internet. It looks for links to other pages and recursively travels these links, finding more and more pages to scan and storing them in an index.
 - b. A more detailed explanation can be found here:
https://en.wikipedia.org/wiki/Web_crawler
2. Index
 - a. The index is where the results of a web crawl are stored. The information retrieved is broken up into various components and categorized to make it faster and easier for the search engine to store, access and determine the relevance of the data being stored.
 - b. A more detailed explanation can be found here:
https://en.wikipedia.org/wiki/Search_engine_indexing
3. Algorithm
 - a. An algorithm is a set of rules or process that enables a search engine to match the user's query to information stored in the index.
 - b. A more detailed explanation of Google's algorithm can be found here:
<https://en.wikipedia.org/wiki/PageRank>
4. Personalization
 - a. Google and other search engines look at your search history, the type of device you're using, your location, as well as other factors to make their search results more relevant to you personally. A more detailed explanation can be found here:
https://en.wikipedia.org/wiki/Personalized_search

All of these elements are combined together to form the search engine results page (SERP), and how this page is constructed is more or less unknown to anyone but the very few Google search engineers who work on the project, and those who provide them with their mandate.

In addition to the organic search results that are the most trusted within the Google ecosystem, the company has begun wrapping these results in various forms of ads, reviews, maps, images, videos, and snippets that take content directly from the top search result and place it right on Google's page. You may have also used Google's calculation, conversion and translation tools, which enable you to receive the answers you need without visiting a third-party site at all.

Google is becoming an answer engine, which is vastly different than the founding of the platform. As an answer engine, there is increasingly only the need for a single, definitive answer. As it approaches that horizon, it is important to think about the implications of having one go-to source for truth on the Internet; especially in light of recent efforts to censor content under the guise of 'fake news' and the thought of an increasing monopoly position and how much trust is being put in one entity.

Search Engine Transparency

Despite having years to become more transparent and having almost unlimited resources to invest, search engines have become increasingly secretive. They offer a murky dispute resolution process, it is almost impossible to contact anyone directly and obtain answers, their ranking factors are virtually unknown, and ever-changing.

Often times massive algorithm updates that impact millions of sites are released unannounced, and are even denied or obfuscated. This leaves webmasters constantly on high alert, waiting for the next shoe to drop. It is left to the search engine optimization community to try to make sense of things, almost always after the fact.

Here's an example of a post discussing a recent Google update:

<http://searchengineland.com/new-unconfirmed-google-fred-update-shakes-seo-world-270898>

And here's a timeline of all of the tracked Google algorithm updates:

<https://moz.com/google-algorithm-change>

While this may seem like a search engine 'staying ahead of the game', that game is actually the livelihoods of millions of people. Because search is such a powerful way for consumers to connect with businesses, many now live by the sword and die by the sword.

The lack of transparency leaves people guessing and feeling uncertain about how to effectively use the Internet as a cornerstone of their client strategies.

Role of The Community

Despite the massive impact that search engines have on the lives of all of us - from business owners to students to politicians to recreational searchers - it's remarkable how small a role the community plays in the world of Google and other search engines.

There's a forum for webmasters (<https://productforums.google.com/forum/#!forum/webmasters>), but there are no guarantees that anyone related to Google will reply, and in the vast majority of cases, they don't.

There are third-party search engine optimization groups like <http://community.seobook.com/> and <https://moz.com/community>, but again, no official recognition or participation from Google or other search engines.

Google does host a number of events, including <https://events.google.com/io/> and has the [Google Developer](#) program, but these are more announcement-like in nature than actually participatory. Similarly, there are some top-down info resources available at <https://www.google.com/policies/>, but as far as an actual community of voices outside Google having a voice inside, there isn't much.

Decentralization

From Wikipedia:

Decentralization is the process of redistributing or dispersing functions, powers, people or things away from a central location or authority.¹²

The New Yorker reports that although the Internet was originally decentralized, in recent years it has become less so: "a staggering percentage of communications flow through a small set of corporations – and thus, under the profound influence of those companies and other institutions [...] One solution, espoused by some programmers, is to make the Internet more like it used to be – less centralized and more distributed."¹³

In the context of this white paper, we are specifically referring to the application of blockchain¹⁴ and other distributed technologies that utilize node and peer-based networks that operate collectively to provide a service that is both resilient and, ideally, trustless¹⁵.

There are widely-varying degrees of decentralization within the technology space, with blockchain technologies such as [Ethereum](#) and [Bitcoin](#) being completely decentralized with no single point of failure or ability to compromise the network.

These truly decentralized services run on different protocols than the regular Internet, which is why some refer to Ethereum in particular as 'Web 3.0'. These services require special software to participate in transactions, in particular, wallets. While these may be connected to the web, the actual underlying infrastructure is separate.

Therefore, to build a truly decentralized search engine would be extremely difficult, and currently impossible, because all of the content that the search engine would index and link to would be provided by the non-decentralized Internet. Ultimately, as more content moves to blockchain-based networks, this may change, and there is certainly an opportunity to index that content as it is created, however, it is limited in scope and use at this time.

For those reasons, within the context of a search engine, decentralization is likely best viewed as a stepped approach, minimizing the current centralization of search activity through a single provider, and expanding the range of choice while simultaneously incorporating innovative distributed technologies into the platform and opening up the governance to the community of users / members.

Due to the currently closed nature of search, simply introducing transparency, open source technology, community participation and consensus, along with the tokenization and distribution of value created would be a huge step forward.

¹² <https://en.wikipedia.org/wiki/Decentralization>

¹³ <http://www.newyorker.com/tech/elements/the-mission-to-decentralize-the-internet>

¹⁴ <https://en.wikipedia.org/wiki/Blockchain>

¹⁵ <https://keepingstock.net/explaining-blockchain-how-proof-of-work-enables-trustless-consensus-2abed27f0845>

Organization

Presearch is a multi-phase project:

- Phase one - operation as a company
- Phase two - operation as a non-profit foundation

Ultimately the community needs to control the Presearch platform, so the community should have a voice in the actual legal structure of the project. As such, a temporary corporation has been created to get started, and Presearch will then transition over to a community-owned and controlled foundation.

Therefore, we are laying out below the current organizational structure of the company and a potential path for the community to consider for the final structure.

Phase One:

1. The legal entity is a Canadian corporation, Presearch.org Global Limited., which was incorporated on July 7th, 2017.
2. There is a single shareholder for easy voting and transition to Phase Two. We anticipate that this structure will persist for an estimated 12-18 months until that transition.
3. We will undertake all measures possible to ensure a clean and timely transition to Phase Two, including the following guiding principles:
 - a. No accumulation of significant debt or long-term ongoing liabilities
 - b. Single shareholder to ensure total responsibility for project
 - c. No assignment of IP to any entity other than Presearch
4. This company will undertake the early-adopter token sale and operate from that revenue.

Phase Two:

1. Establishment of the community charter, directors and governance / consensus model.
2. Establishment of a permanent foundation in a country and region with the utmost respect for privacy and data integrity, with favorable tax and regulatory environment, and a stable and freedom-respecting political climate. Switzerland is a logical choice.
3. Transition of all IP and assets to the foundation.
4. This foundation will then undertake the general public token sale and operate from that revenue.

The Product

The World Deserves An Awesome, Open and Decentralized Search Engine - Let's Build it!

Strategy

The core tenet of the Presearch strategy is that **The Community Knows Best**.

Presearch is a highly-ambitious project. Google is one of the best companies in the world, and #1 on the Internet. Improving on their results, experience and integrations will be no small feat.

However, we believe that collectively, the Community can creatively and elegantly solve its own problems from the ground up and create an amazing and open search engine that is aligned with the interests of humanity, not just one company.

That is why the strategy is to boot the project up and establish the core principles of consensus that will enable the community to thrive and build a search engine to serve the world for decades to come.

During boot up, the core Presearch team seeks to give the project the momentum it needs to get to the point where an active and engaged community exists, and will launch early and iterate rapidly based on feedback.

Because every project needs to start somewhere, it will begin with a vision borne from the experience of being marginalized by the Google ecosystem¹⁶, a unique perspective that provides the initial core team with the insight, vision and drive to pursue the project.

Therefore, for the purposes of this white paper, we will not cover many details of the actual 'search engine', aside from the fact that it needs to be transparent, open and decentralized.

Transparent, Open and Decentralized

These are powerful, and compelling words. But what do they actually mean within the scope of this project?

Transparent

We will make public on the web complete details on how and why Presearch operates the way it does. This will include ranking factors, usage stats, roadmaps and financial statements. We will provide a proper dispute resolution process to ensure that any edge case scenarios are handled in a timely and diligent manner. We will open up a standardized partnership program so that all partners, big and small have a voice and a place within the Presearch ecosystem, with deal terms made public.

¹⁶ <http://www.mercurynews.com/2011/07/28/local-business-site-challenges-google-ranking-2/>

Accessible

There will always be the ability to directly contact an official representative at Presearch via phone, live chat, email or online forum and receive a personal reply within 72 hours.

We will quickly expand to support every language and every device possible.

Open

Ultimately, we see a huge opportunity for various specialist groups to fork the Presearch platform and build more focused versions of the site. As a fully open source project, this will be possible for anyone.

This includes:

1. Open source licensing
 - a. All code will be licensed under GNU General Public License version 3
2. Public repository
 - a. All code will be available in a public Github repo: <https://github.com/presearch>

Decentralized

Full decentralization will take a number of release cycles, and a fully-decentralized version will likely release first on mobile. The plan is to progress from a decentral-ish Internet-based search tool to a fully-decentralized search engine over the next three years.

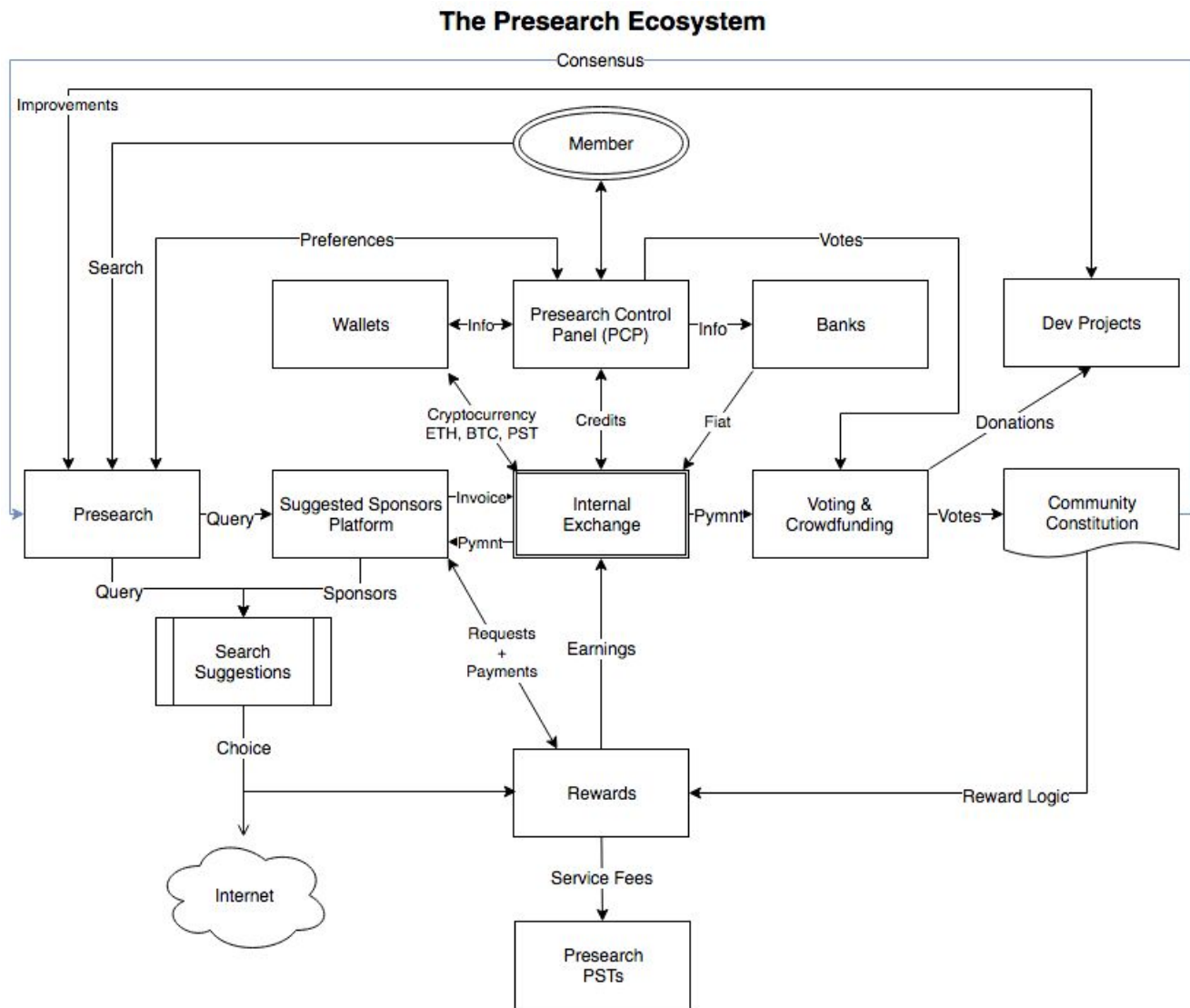
Roadmap

2017				2018				2019			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase One - Ship, Test & Promote Search Tool											
Proof of concept - establish Presearch use case and vision for a decentralized, open search engine											
Organization - set up structure, funding and core team, establish early model for community transition and begin outreach											
Release Search Tool - pre-search interface, token integration, engine customization, reward platform, sponsor platform											
Refine Search Tool - security, kill bugs, prevent fraud, improve usability											
				Promote Search Tool - begin actively building partnerships and spreading the word							
Phase Two - Community Ownership											
				Establish Consensus Model - engage the community to determine how to make this transition, lock in Community Constitution							
				Establish Core Roadmap & Team - ensure that key initiatives are outlined and core dev team is engaged							
				Establish DAO - convert Presearch company to a Decentralized Autonomous Organization & Foundation							
Phase Three - Fully Decentralized Search Engine											
								Engage community - analyze needs and establish frameworks for search engine			
								Build - build, release, review, refine, repeat until ∞			

[Click for hi-res version](#)

Beta Release

A working beta release is planned for Q3, 2017. This version is limited to basic customization, rewards, sponsorship and token purchases. Although the first draft of the Community Constitution will be available at the start of the beta release, true voting and crowdfunding will not be made available until Q2 2018.

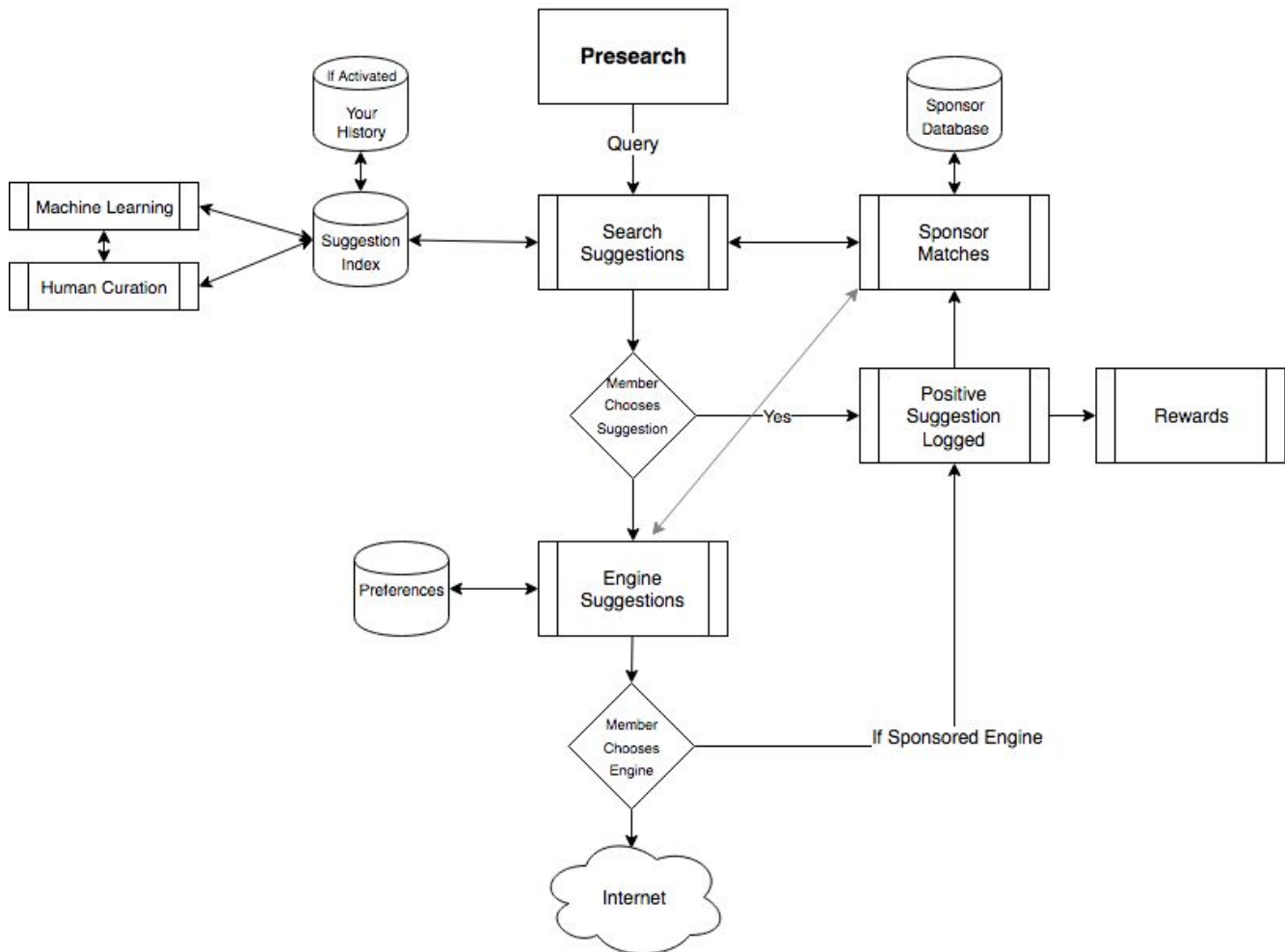


[View the hi-res version](#)

The Presearch ecosystem will be governed under consensus of the Community Constitution.

The Beta product will serve as a proof of concept and minimum viable product for the actual service, which will provide time for experimental technologies to become proven, best practices to be developed and new abstracted models that will be fully-decentralized via the blockchain.

Presearch Search Tool

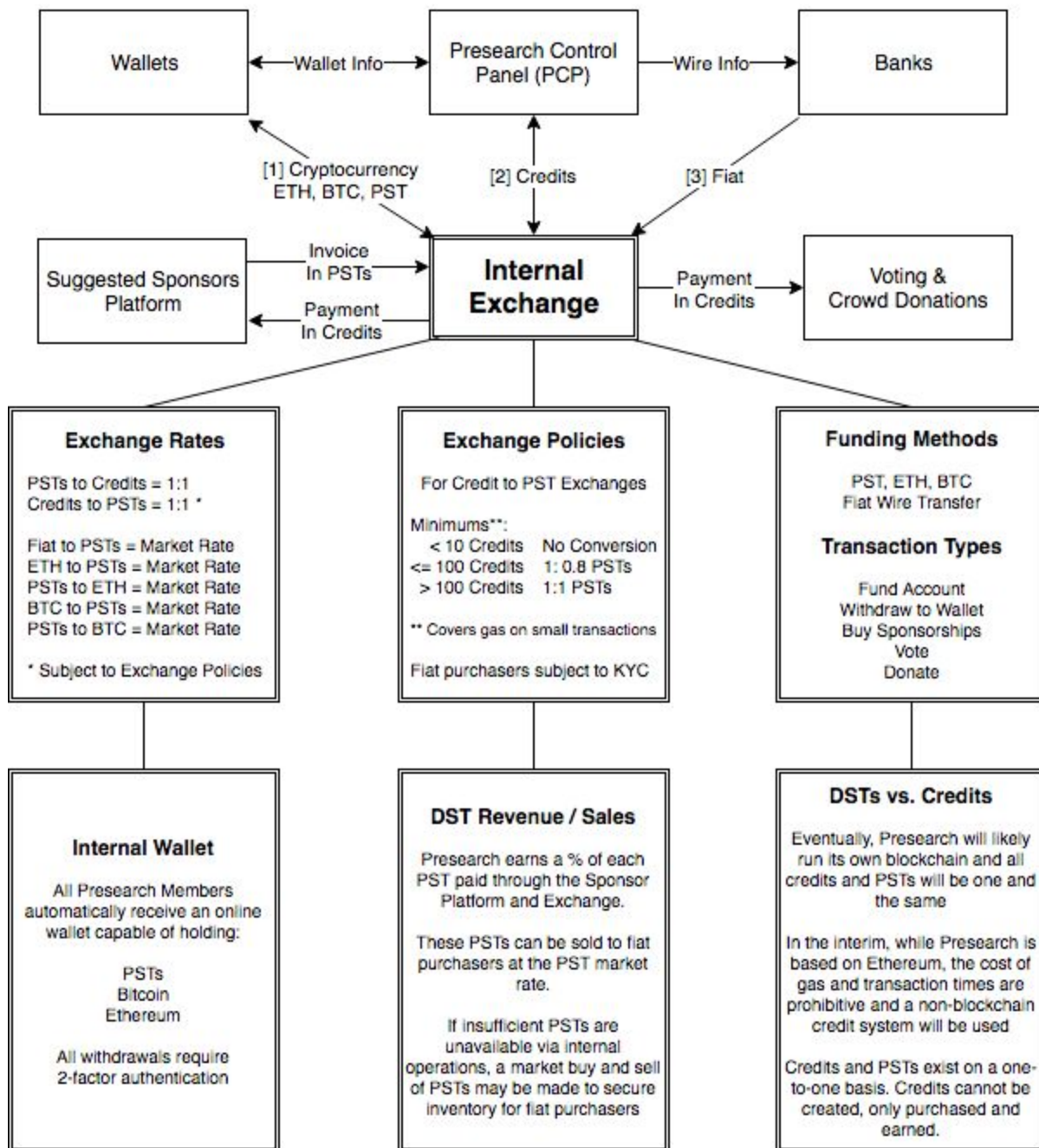


Search Suggestions	Suggested Engines	Sponsored Suggestions	Key Challenges
Members who do not opt out of autosuggestions will receive suggested search terms as they type, in a predictive manner, populated by a custom index	Presearch allows Members to choose which search engine they use. By default, Google is selected but other types of engines are available	Revenue from Keyword Sponsorships and Sponsored Engines is split between Member doing the search and Presearch to fund site operations	Building the initial autosuggestion index will require significant usage to be truly valuable, and if other APIs are not available
Sponsors will be able to pay to have a 'brought to you by' sponsorship displayed at the top of the search suggestions - if you click it, you may be rewarded	Members who do not opt out will have other engines suggested based on their preferences - If a sponsored engine is searched, you may be rewarded	Initial revenue share: 80% - Member 20% - Presearch service fee Details in Rewards diagram	Additionally, creating an autosuggestion mechanism that is fast enough to predict user intent, and introduce sponsored results will be challenging

[View the hi-res version](#)

The search tool is the heart of the Member / user experience. This is where you will search the web, choose your engines, and see suggestions. The development roadmap calls for browser extensions, and a mobile browser, however, those products are not the core focus of this white paper and thus are not included.

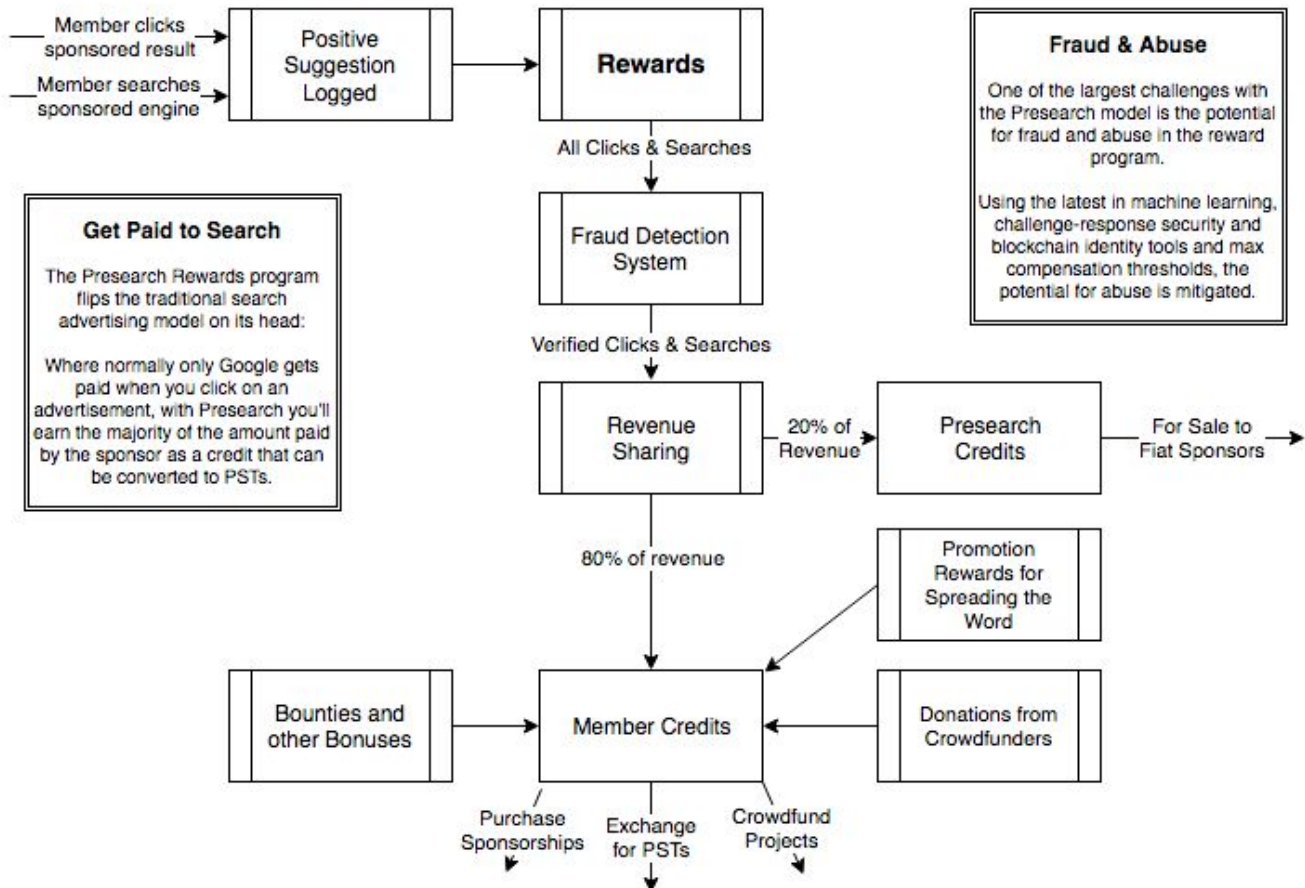
Presearch Exchange



[View hi-res version](#)

The internal exchange handles all transfers of value within the Presearch ecosystem. Due to gas costs on Ethereum transactions (\$0.02 - \$0.50 per), it is impractical to use PSTs for every transaction. Therefore we use credits to track internal transactions and enable exchange to and from PSTs. Credits and tokens exist on a one-to-one basis, and credits must be backed by a reserve of PSTs, ensuring exclusivity and limited supply.

Presearch Rewards



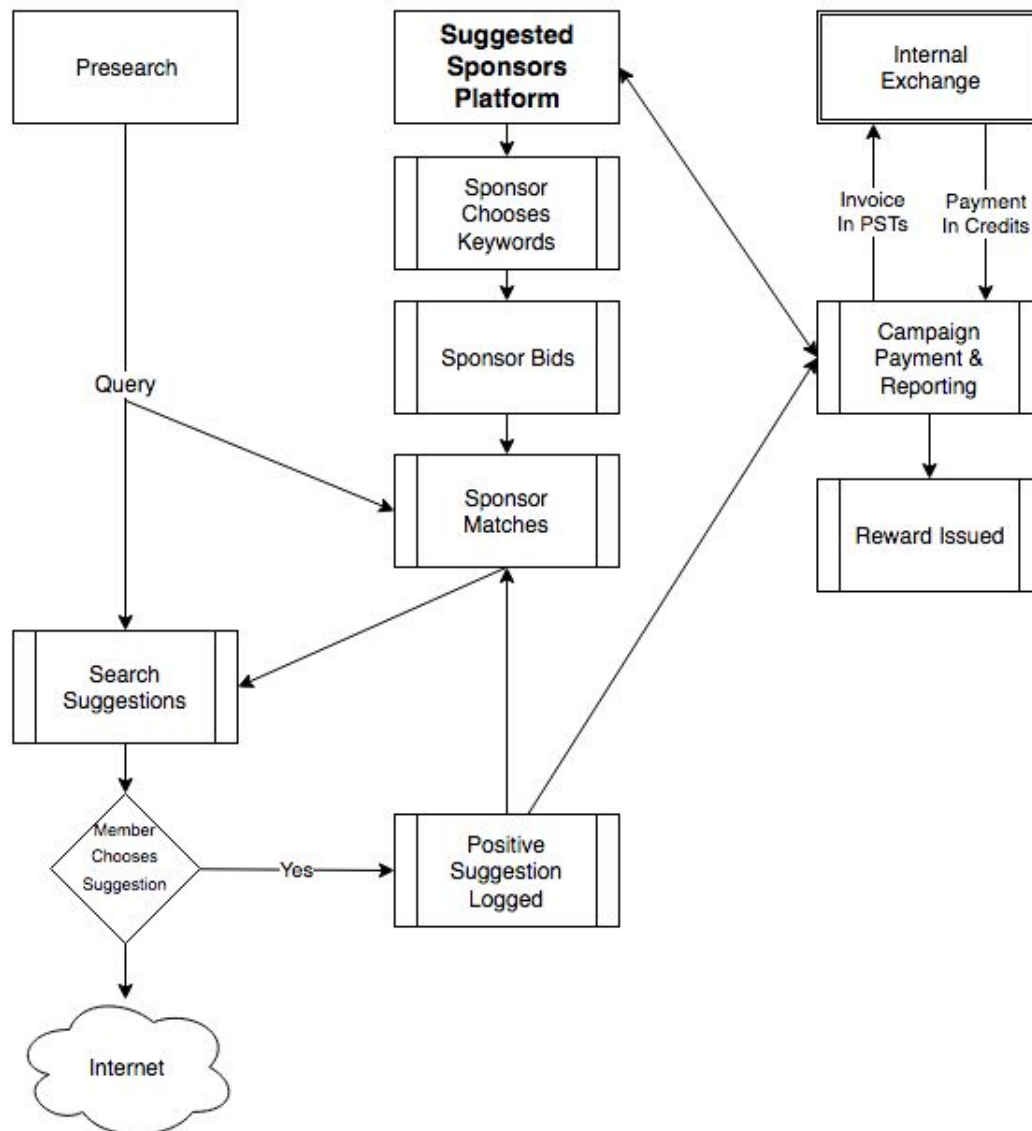
[View hi-res version](#)

The reward system is designed to drive usage of the platform and provide Members with more incentive to help spread the word about Presearch, as well as to transfer value to Members for willingly choosing Sponsored Suggestions when they search.

PSTs (or credits for PSTs) will be issued to Members for the following actions:

1. Searching via Presearch (rate will depend on engine chosen)
2. Clicking on Sponsored results in the search field autosuggestions and viewing sponsored content.
3. Promoting Presearch that results in new Member sign ups and usage
4. Donations from other Members for participating in dev projects
5. Bounties and other bonuses from specific campaigns outlined
6. Future reward types may be added at a later date

Suggested Sponsors Platform



<p>Transparency</p> <p>Keyword Volume Provided Competing Bids Provided Clickthrough Rate Provided</p> <p>Sponsor Matches</p> <p>Sponsors are matched based on keyword, bid and relevance score - members can rate results via browser extension</p>	<p>Types of Sponsorships</p> <p>Keyword Sponsorships Sponsor pays when a member clicks on Autosuggest Sponsored link</p> <p>Site Sponsorships Sponsor pays when logo is shown in site footer - currently for all users</p> <p>Sponsored Engines Sponsor pays when engine is searched / chosen</p>	<p>Sponsorship Revenue</p> <p>Revenue from Keyword Sponsorships and Sponsored Engines is split between Member doing the search and Presearch to fund site operations</p> <p>Initial revenue share: 80% - Member 20% - Presearch service fee</p> <p>Details in Rewards diagram</p>	<p>Payment Terms</p> <p>Bidding and invoicing is in PSTs Payment is in credits, account is pre-funded and credits deducted Multi-currency</p> <p>Fraud Prevention</p> <p>Machine Learning Tiered Rewards Verification Systems</p>
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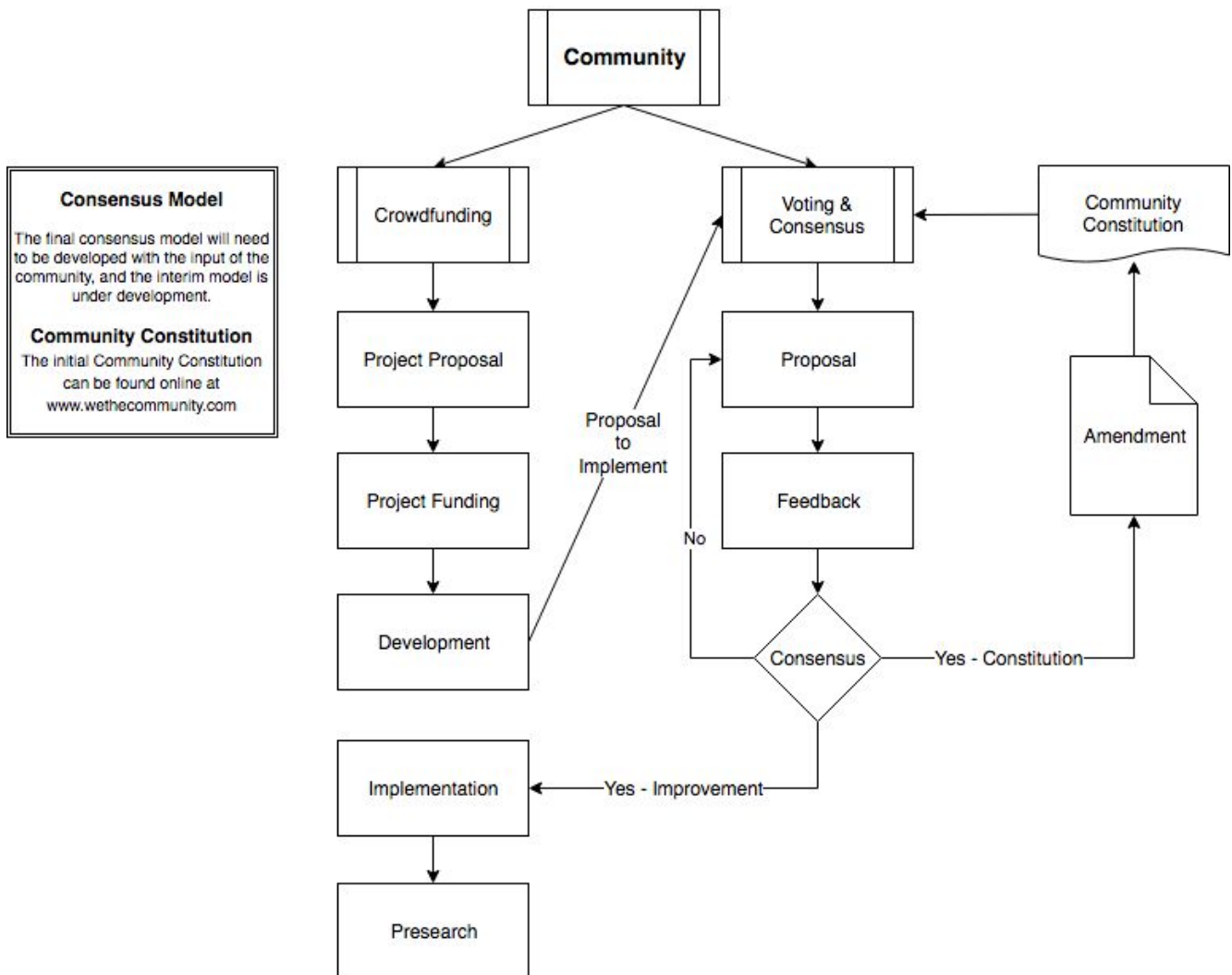
[View hi-res version](#)

Confidential Draft

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Version 1.9 | July 20, 2017

Presearch Community



[View hi-res version](#)

The community is the heart of the Presearch ecosystem. In order to be transparent, open and innovative, we need to attract smart people who can jump in and run with the concept and evolve it in ways that a single company or team never could.

We believe in the wisdom of the community to solve its own problems, determine what's fair, and create systems and processes that support its ideals and goals.

For this reason, the consensus model and constitution are absolutely the foundation upon which the entire project is created. If we get these models right, many of the other components of the platform will fall into place as the community iterates and finds balance and equilibrium. While we like to pretend that we have all the answers, we know that in fact it is the community who do, and therefore

the consensus model and constitution must involve community members and cannot be organized in a top-down manner.

Community Constitution

The Community Constitution is a concept that we have been thinking on for many years at a local level with ShopCity.com.

Because each local community is unique, and its values and ideals different, we believe that there can be no one-size-fits-all approach, and that each community must have the right to create its own constitution with the ground rules for participation.

In this instance, the community is extremely broad - anyone on the planet can be part of the Presearch community, and because this service is one of those fundamental, utility-like services that must be as fair, balanced, open and transparent as possible, the constitution, like that of the United States of America, must be broad in scope and should focus on the inalienable rights of Members, instead of specific rules or regulations.

This document will be a work in progress, and at the time of writing is only loosely defined.

In researching this project, we studied the last new search engine extensively and found that [blekko's](#) 'Web search bill of rights'¹⁷ was particularly inspiring and well-done. It is reproduced below for your information:

1. Search shall be open
2. Search results shall involve people
3. Ranking data shall not be kept secret
4. Web data shall be readily available
5. There is no one-size-fits-all for search
6. Advanced search shall be accessible
7. Search engine tools shall be open to all
8. Search and community go hand-in-hand
9. [Spam](#) does not belong in search results
10. [Privacy](#) of searchers shall not be violated

We would appreciate your insights to refine and improve the Presearch Community Constitution.

Once we have our 'northstar' guiding document against which we can evaluate all decisions, we feel that it is very important that this document is posted prominently to demonstrate our commitment to it, and to ensure that all participants are aware of the foundational principles upon which Presearch is built. As such, this document will receive a prominent and permanent home on the domain name 'WeTheCommunity.com', a play on the 'We The People' from the preamble to the US Constitution.

¹⁷ <https://web.archive.org/web/20121107201910/http://help.blekko.com/index.php/what-is-blekko/>

From a Search Tool to a Search Engine

As mentioned a number of times throughout this document, and in conclusion to the Product section of the white paper, we wanted to reiterate that this is a multi-stage project, and that building a fully-decentralized search engine from scratch at this time is premature due to a rapidly-changing technology landscape that is seeing new solutions come to market almost daily.

As such, we subscribe to the belief that we need to take baby steps and start small with the search tool model. This incarnation of the vision establishes openness and transparency in search, while minimizing the need to build our own index.

Over time, as the community grows, distributed technology evolves, and more and more Internet users become Power Internet Users, we can empower these trends with a platform that is constantly improving and iterating at the hands, hearts and minds of the community.

This transition may take significant time, or may be surprisingly quick. At this point, we do not want to set the expectation that it will be quick, and for the purposes of this white paper remain primarily focused on the vision for a decentralized search engine while leveraging the early model for the search tool described in this document.

Community Consensus Model

The community consensus model will be the key to empowering Presearch Members and stakeholders to build the platform, believe in the model and spread the word to their networks.

It really is the protective shield within which all other facets are housed.

Because of its critical role in protecting the Presearch vision, it is extremely important that we get the consensus model right.

Key considerations include, but are not limited to the following:

1. Maximizing engagement and participation
2. Minimizing centralization of power
3. Providing a framework for rapid progress and iteration
4. Ensuring that the long-term vision cannot be easily corrupted
5. Creating mechanisms with which to continuously evaluate change and course-correct when necessary
6. Ensuring that the wisdom of the crowd does not become the tyranny of the majority
7. Ensuring the interests of all Members are protected and accommodated at the same time

We recognize that this is no small feat, simply from a philosophical standpoint, let alone from a practical and programmatic one. However, if we can figure it out, the applications could be vast.

Participation and Rewards

The number one underlying goal of this project is to build a community around the concept of open, transparent and decentralized search results, where all stakeholders can dig into the platform to confirm that it is fair, that it is providing the expected results, and that it is creating an ecosystem in which any person or organization can participate and incorporate into their workflows and business models.

While we anticipate that the size and passion of this community is significant, we intend to incentivize participation at all levels in the early days to ensure that critical mass is reached, and that we attract the top thinkers and doers to the platform as Members.

One way to do this, which in other contexts is quite powerful, is gamification of various systems: providing users with a reward for completing an action.

We intend to gamify the core Presearch systems and use the PST Ethereum-based token as both the measure and the reward for participation. These tokens can be used to run Sponsored Suggestions and other promotions, or, if there's no promotional need for a given Member, to be transferred to another Member who can use them for this purpose.

The exact details of how rewards are generated is detailed in the Token Model section.

Abuse Prevention

One of the most significant challenges with any online application is the prevention of abuse. Simply stopping bots from spamming a web form can be a real task and require major effort to deter.

When you're a search engine and nefarious individuals stand to gain by gaming the system and capturing more traffic than they would naturally, the problem becomes orders of magnitude greater.

Tying a reward / incentive mechanism to key functionality introduces a whole other dimension, and makes abuse and fraud the biggest technical challenge to overcome.

Fortunately, there are many best practices that have been developed, and which we can adopt; from simple challenge-response security systems, to tiered rewards that decrease the incentive to attempt to game the system by providing diminishing returns, to fraud detection algorithms that quickly catch scammers before they can cause real harm.

Security often comes at the cost of usability, and we will be smart about balancing these factors.

As with all aspects of the project, but especially on the technical side, we know there are some very talented developers within the decentralization community, and we will turn to them for input on how best to combat the more difficult challenges posed by fraud and abuse.

Go To Market Strategy

Milestones

- Phase One
 - Establish the organizational roadmap and early infrastructure
 - Release the Search Tool product
 - Complete the initial token sale
 - Distribute tokens
 - Exchangeability
 - Community engagement
 - Product refinement
 - Promotion and marketing
 - Begin researching potential methods for creating fully-decentralized search engine
- Phase Two
 - Establish consensus model
 - Establish core roadmap & team
 - Establish DAO and transition over
- Phase Three
 - Engage community
 - Begin building fully-decentralized search engine
 - Continue engaging the community

Token Model

Core Properties

1. Name: Presearch Tokens (PSTs)
2. Standard: Ethereum ERC20
3. Max Supply: 1,000,000,000 pre-mined
4. Release date: July 25th, 2017 at 10am EST

Use Cases

The Presearch PST token is the key medium of exchange within the Presearch ecosystem and is used for the following purposes:

1. To reward members for usage, contribution to, and promotion of the platform
2. To purchase sponsorships and promotional placements
3. To reward partners who have provided traffic and visibility to Presearch
4. To vote on community matters
5. To fund development projects undertaken by the community

Rewards & Incentives

Members will be rewarded with tokens for using the Presearch system. Base levels of reward will be provided for searching using Presearch, with increased rewards provided by Sponsored engines that will be able to pay more for usage. Sponsored Suggestions will be matched to keywords, and Members will be rewarded for clicking on Sponsor links and giving the Sponsor a shot at solving the Members' needs. Members can also reward other members, specifically those who participate in the development projects that are listed.

Members will also be incentivized to share the platform with their network, and will be able to earn rewards for new sign-ups. These rewards will be tracked as Credits that can be converted to PSTs.

Sponsorship Platform

The sponsorship platform within Presearch will enable businesses and organizations to connect with potential customers via Sponsored Suggestions.

These promotional vehicles will be made available for purchase in an auction-based model using credits denoted in PSTs.

PSTs will be awarded whenever a Sponsored Suggestion is seen, and an additional award will be collected when a Sponsored Suggestion is clicked. These awards will be split between Presearch and the actual member who saw / interacted with the promotion.

In addition to keyword-targeted Suggestions, engines will be able to denote the number of PSTs they are willing to award Members who choose to run searches using their platforms, and if selected, Members will accumulate PSTs when they search using those Sponsored Engines.

Referrals & Partners

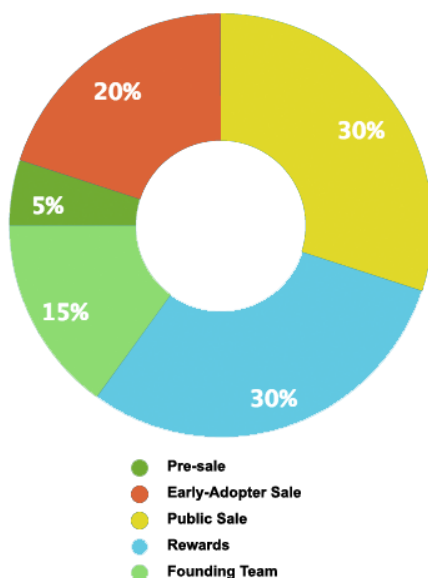
Members who choose to spread the word about Presearch will receive PSTs for their efforts. We will award PSTs for referred Member sign-ups, inbound traffic, social sharing and other promotions that drive people to Presearch.

One of the most exciting uses of PSTs is to enable Presearch to build a network of partners who can leverage their own traffic to generate awareness and searches through the platform. For instance, a newspaper that has thousands of visitors will be able to add a Presearch field to their website so that people can search directly from the partner property. They will then be rewarded in PSTs for searches conducted.

Voting & Project Funding

PST-holders will be able to use their tokens to vote on the direction of the project and help shape the Community Constitution. They will also be able to organize and contribute to crowdfunded campaigns for development projects and other topics of interest to the community.

Allocation of Tokens



1. Pre-sale:	50,000,000
2. Early Adopter Sale:	200,000,000
3. Public Sale:	300,000,000
4. Rewards:	300,000,000
5. Team:	150,000,000

Team

**Colin Pape***Project Lead*

Colin is a serial entrepreneur who founded the community commerce network, ShopCity.com. In 2011, Colin found himself mired in a battle with Google and realized that the world desperately needs a transparent and open search engine.

**Rob Calvert***Technical Lead*

Rob has more than 20 years experience in application development, network security and project management. Prior to joining ShopCity.com, Rob worked in a C-level position for a big three accounting firm in the Caribbean.

**Nolan Dubeau***Product Development Lead*

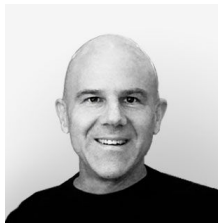
Nolan's career as a web dev saw him work with CRYPTOCARD, Mercedes-Benz and JDS Uniphase, leading to positions as Creative Director, Interactive at XM Radio and VP Engineering at Guardly, a VC-backed tech company.

**David Keefe***Lead Frontend Developer*

David joined the ShopCity.com team in 2012 as part of the content department and has worked his way up to become a senior developer. David is largely responsible for frontend development and customer-facing product improvements.

**Corey Piitz***Senior Fullstack Engineer*

Corey has been programming for more than 25 years, working at vertical marketplace Labx.com, instructing college-level programming courses and serving as lead fullstack engineer for ShopCity.com.



Jim Terry

Blockchain Researcher



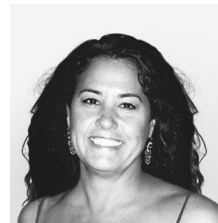
Prentice Chang

Blockchain Researcher



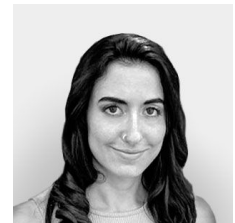
Thomas LeClair

Marketing



Sherry Cooper

Community Builder



Megan Wojtowych

Graphic Designer

Conclusion

There is a clear and present need for an open, decentralized search engine. The world cannot continue to rely on one company for the vast majority of its searches.

The current degree of information centralization is both unprecedented and dangerous, from both a resilience and a monopoly of power standpoint.

Never before in the history of the world has one company had so much power over the flow of the world's information.

By raising a flag dedicated to a future in which search is open, and in laying out the vision for a transparent and decentralized alternative to the current search hegemony, Presearch will attract the world's best thinkers, community advocates and coders to help build the search engine for Web 3.0.

Presearch will dedicate a lot of time, energy and resources to getting the community consensus model right, providing Members with a framework for active participation in the decision-making and coding of their open search engine.

The Ethereum-based, exchangeable token model is an extremely powerful tool, and Presearch will leverage its PST token to reward and incentivize the community to use, promote and contribute to the platform, enabling Members to benefit by using the system and to be rewarded for engaging with Sponsors, rather than being a product that is monetized by the search engine.

The Suggested Sponsors platform will enable businesses, organizations and individuals to reach a savvy group of freedom-minded web searchers with an innovative promotion at exactly the right time. An auction-based system will enable Sponsors to bid on placement using PSTs.

Presearch is flipping the current search engine model on its head. Rather than a user paying for decent search quality by being overexposed to ads, Members will actually earn rewards for allowing themselves to be introduced to Suggested Sponsors and Engines.

As the early framework of the first generation search tool picks up momentum and the open search movement grows, the organization will transition to a DAO that will serve as custodians for Presearch and ensure that future generations are not stuck with an Internet that has only one dominant search engine and such extreme centralization of online power and control.

Assuming success with this project, and make no mistake, it won't be easy and there will be risks, we will have lit another beacon of freedom on the Internet, standing alongside and on the shoulders of other great, open organizations like Ethereum, Wikipedia and DuckDuckGo.

Presearch needs an awesome community of freedom-loving searchers. Will you join us?



We hope to see you on the journey! :)

Contact Info

info@presearch.io