"Yeek": A Self-Policing, Trustless Gig Economy On The Blockchain

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DRAFT - ALL CONTENT SUBJECT TO CHANGE

Author Bios

Mr. Rahimi is an experienced startup founder and a senior engineer. He came up with the idea of Yeek when he was short on cash one day and joined Fiverr, only to find out that nobody was willing to hire a new user without a bunch of reviews. After eating yet another box of Kraft Dinner he realized that a decentralized, crowdsourced arbitration system would eliminate the risk of fraud that plagues both workers and clients on existing Platforms.

Mr. Ottens has a track record of getting stellar results in the toughest industries. Alex founded Studio Bar, a Toronto nightclub which enjoyed 6 very successful years, and previously to that was the founder of a home renovation contracting firm that is still in operation today. He is a passionate and highly experienced cryptocurrency trader and is well regarded among his peers in the industry.

Mr. Eugene invented online gambling back in 1995. Since then, he has been an investor and partner in numerous ventures, including the very first publicly traded marijuana company in Canada. Eugene first worked with Mr. Rahimi back in 2001 to develop an electronic cash system that was far ahead of its time.

The Yeek Ecosystem

- The Internet
- Gig Economy
- Ethereum Blockchain
- Business Owners
- Community Leaders
- Miners
- Exchanges
- Arbitrators
- Distributed Database
- Workers

Abstract

The Gig Economy has exploded in the 2010s, and represents the beginning of a major shift in society. Employees are leaving their jobs and taking control of their lives by selling their talents on a huge variety of online platforms: Uber and Lyft for the drivers, Upwork for IT contractors, Fiverr for small jobs of any variety, and Mechanical Turk for "microtaskers" who respond to simple, automated requests for knowledge and receive a few cents in return. Conversely, businesses of all sizes are moving away from traditional hiring and instead are outsourcing tasks to workers in the gig economy, saving them the expenses of employee onboarding, government taxes and fees, and benefits administration. As of 2018, it is clear that the gig economy is not just a passing fad and that it will continue to grow in economic importance in the coming years.

However, not all is perfect in this Brave New World: the centralized nature of today's most popular platforms leads to certain inevitable risks, inefficiencies, and limitations. The use of fiat currency makes all participants in the gig economy subject to the policies and fees of merchant banks that facilitate the flow of funds into and out of the economy (e.g. by credit card, PayPal, or bank transfer). There is also the security

risk of handling and storing personal payment information. Users of a platform must trust that the platform is honest, and that deposited funds are segregated from the company's operating funds. Platforms often hang on to funds for longer than necessary by automating deposits but making withdrawals a manual process lasting several business days. Finally, the feedback-based reputation systems currently in use are insufficient, as they make it very challenging for new members of the platform (whether buyers or service providers) to attract business: because there is no trustless dispute resolution model, the escrow systems in use do not serve to protect either party against a dishonest "bad actor" who is delivering poor quality or unfairly withholding payment.

The past few years have seen several Blockchain-based attempts to solve these problems through the creation of distributed, cryptocurrency-based platforms that automate at least part of the flow of commerce and add a degree of transparency not previously seen. However, the gig economy dApps currently in production fail to provide a fully trustless solution, relying on a rudimentary escrow system combined with reputation scoring and personal discretion to establish trust (for example, Latium). As previously stated, this makes buyers and sellers reluctant to deal with new members of the community who have not proven themselves through previous completed gigs.

We propose a distributed gig economy platform, "Yeek" that is truly distributed, automating all aspects of the flow of funds into, out of, and within the community via smart contracts that run on the Ethereum Blockchain. Community members will conduct business with Ethereum or the YEEK, an ERC20 token that serves dual purposes: it is a utility token for the Yeek Platform, and also the proof-of-stake by which operating revenue is distributed amongst all

stakeholders in the form of quarterly dividends. A trustless dispute resolution system, like the rest of the platform, is controlled by Ethereum smart contracts; disputes are arbitrated by impartial community members who are paid to review submissions against the original gig requirements. This makes it possible to safely conduct business with a new, untrusted user as you are fully protected against fraud, delays, or unsatisfactory work.

Market Need: Problems Solved by YEEK!

1. **Centralized gig marketplaces are subject to arbitrary policies, regulations, and content censorship , and government regulations.** YEEK! is a truly decentralized dApp on every layer. Payment, escrow, and dispute arbitration are handled by smart contracts that run in the Ethereum Blockchain; Web content and user-generated content (Gig postings and work submissions) are stored in decentralized file systems such as IPFS or Swarm, with their hashes stored in a smart contract for verification and transparency. Real time communication between members of the community will initially be handled using existing, secure communications networks such as Telegram; the long-term vision of YEEK calls for a transition to Whisper (the Ethereum-native distributed messaging protocol) as soon as the Whisper codebase is judged reasonably stable and complete.
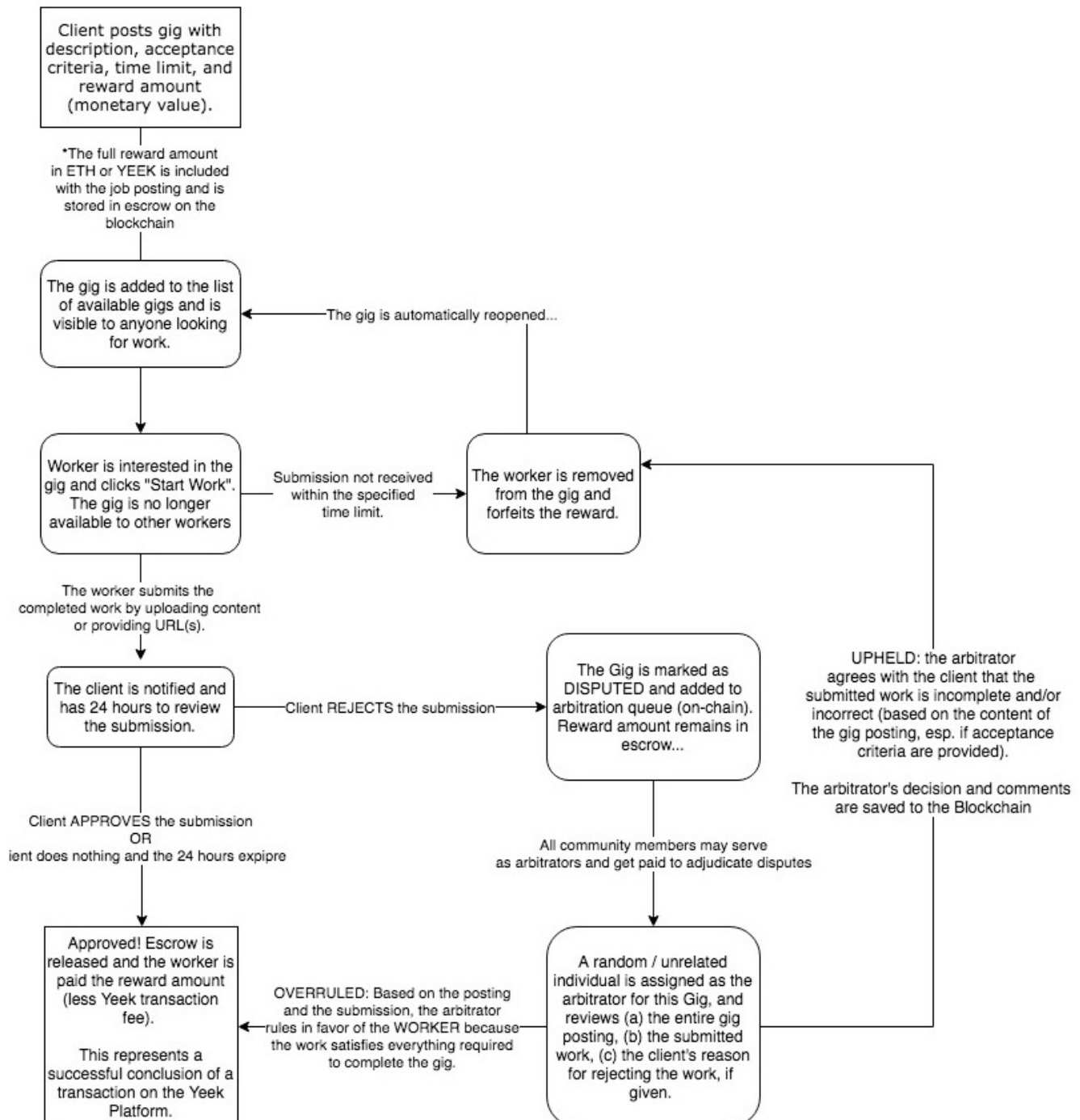
2. **Using fiat currencies as a means of transaction is slow, insecure and expensive, and adds "major banks" to the list of outside entities with power to censor or shut down the marketplace.** The entire lifecycle of a YEEK transaction, from posting to payout, takes place on the Ethereum Blockchain, and smart contracts handle the near-real-time routing of payments, directly on the Ethereum Blockchain. Business is conducted using a utility token that represents a unit of value in the YEEK gig economy and allows the holder to share in the revenue generated by the platform. The token is ERC20 compliant and works with common Ethereum wallets including the Metamask browser extension. YEEK Tokens will be traded on major exchanges, and the ICO is structured to ensure liquidity and promote price stability.

3. **Even the newer gig marketplaces that utilize cryptocurrency and a distributed architecture either ignore the "trust" issue completely or rely on user reputation to assess whether an unknown, untrusted counterparty is honest.** With the possible exception of Mechanical Turk-style "microtasks" of extremely low value and complexity, simple escrow systems on their own protect against only one sort of bad actor; they ensure availability of funds but protect against neither of (a) the incompetent or malicious worker, or (b) a client who claims the work is unacceptable and then steals it for his own purposes. Certain existing platforms (even dinosaurs such as PayPal) contain a dispute resolution system - but in a centralized context, such systems become extremely slow and are naturally biased towards the platform's interests.

The Yeek Platform applies a decentralized, crowd-sourced arbitration model to the problem of dispute resolution, and the result is a trustless alternative to reputation scoring that, for the first time, makes it truly safe to do business with anonymous counterparties in the context of the gig economy. And paid work is created for community members who help to resolve disputes, as shown in the Transaction Flow Diagram below.

4. **Startup companies and small businesses operating in the blockchain space have limited budgets with which to hire freelance marketing, creative, and technical staff**. Additionally, much of their efforts are focused on raising capital through the painstaking (and expensive) process of ICO crowdsales - only to immediately turn around and spend that money on labor. The Yeek Platform lets companies post jobs in any currency that they choose: this could be Ethereum, it could be a well known and highly valued ERC20 Token or "Altcoin", or it could be the company's newly minted ERC20 Token that they would otherwise have sold as part of an ICO! In some cases this entirely eliminates the need for the company to raise capital via crowdsale, because instead of selling tokens to investors who stake their money on the company's success, the tokens go to those willing to invest their *labor* (and therefore their time) in exchange for a stake in the organization**.** It is more efficient and cost-effective to directly exchange tokens for labor than it is to exchange tokens for

another currency - and then exchange that currency for a worker's time - not to mention the money saved on blockchain transaction fees.

Use Case 1: Transaction Flow For Manually Verified Gigs

Client posts gig with description, acceptance criteria, time limit, and reward amount (monetary value).

*The full reward amount in ETH or YEEK is included with the job posting and is stored in escrow on the blockchain

The gig is added to the list of available gigs and is visible to anyone looking for work.

The gig is automatically reopened...

Worker is interested in the gig and clicks "Start Work". The gig is no longer available to other workers

Submission not received within the specified time limit.

The worker is removed from the gig and forfeits the reward.

The worker submits the completed work by uploading content or providing URL(s).

The client is notified and has 24 hours to review the submission.

Client REJECTS the submission

The Gig is marked as DISPUTED and added to arbitration queue (on-chain). Reward amount remains in escrow...

UPHELD: the arbitrator agrees with the client that the submitted work is incomplete and/or incorrect (based on the content of the gig posting, esp. if acceptance criteria are provided).

The arbitrator's decision and comments are saved to the Blockchain

Client APPROVES the submission
OR
ient does nothing and the 24 hours expipre

All community members may serve as arbitrators and get paid to adjudicate disputes

Approved! Escrow is released and the worker is paid the reward amount (less Yeek transaction fee).

This represents a successful conclusion of a transaction on the Yeek Platform.

OVERRULED: Based on the posting and the submission, the arbitrator rules in favor of the WORKER because the work satisfies everything required to complete the gig.

A random / unrelated individual is assigned as the arbitrator for this Gig, and reviews (a) the entire gig posting, (b) the submitted work, (c) the client's reason for rejecting the work, if given.

Gigs of higher value / complexity require a human to inspect the submitted work and determine whether it is satisfactory. An example job description for this type of gig would be "We will pay 10 ResortCoins / photo for your vacation shots taken at (a list of hotels in Thailand)! Must be HD resolution, professional quality, and promote a positive opinion of the hotel. You must be the copyright owner of the photo."

It would be simple to verify the first and last of those requirements using an automated system: resolution can be determined by examining the image metadata, and plagiarism detected utilizing Google Image Search APIs and/or AI-driven solutions made for that purpose. "Professional Quality" is highly subjective, but perhaps a dedicated team of AI engineers could solve the problem and train a neural network to handle this (for a few $million). Whether the photo "promotes a positive opinion of the hotel" is even more challenging to assess technologically - and even if it could be approximated by a trained AI model, this approximation might well not agree with the sentiments of the client (who is likely working in consultation with the hotel owner).

Regardless of whether it is *possible* to evaluate the quality of such complex work, it is clearly not practical - especially when the client could flip through dozens of photos per minute and indicate whether or not they met his criteria. If we accept that the client must be involved in evaluating the work submitted to them, then how do we protect against an evil client who claims the work is unacceptable, refuses to pay the worker, and then uses the submitted (photo / blog post / software module / etc) for their own purposes anyways? As described in the chart above, clients can only *recommend* that a
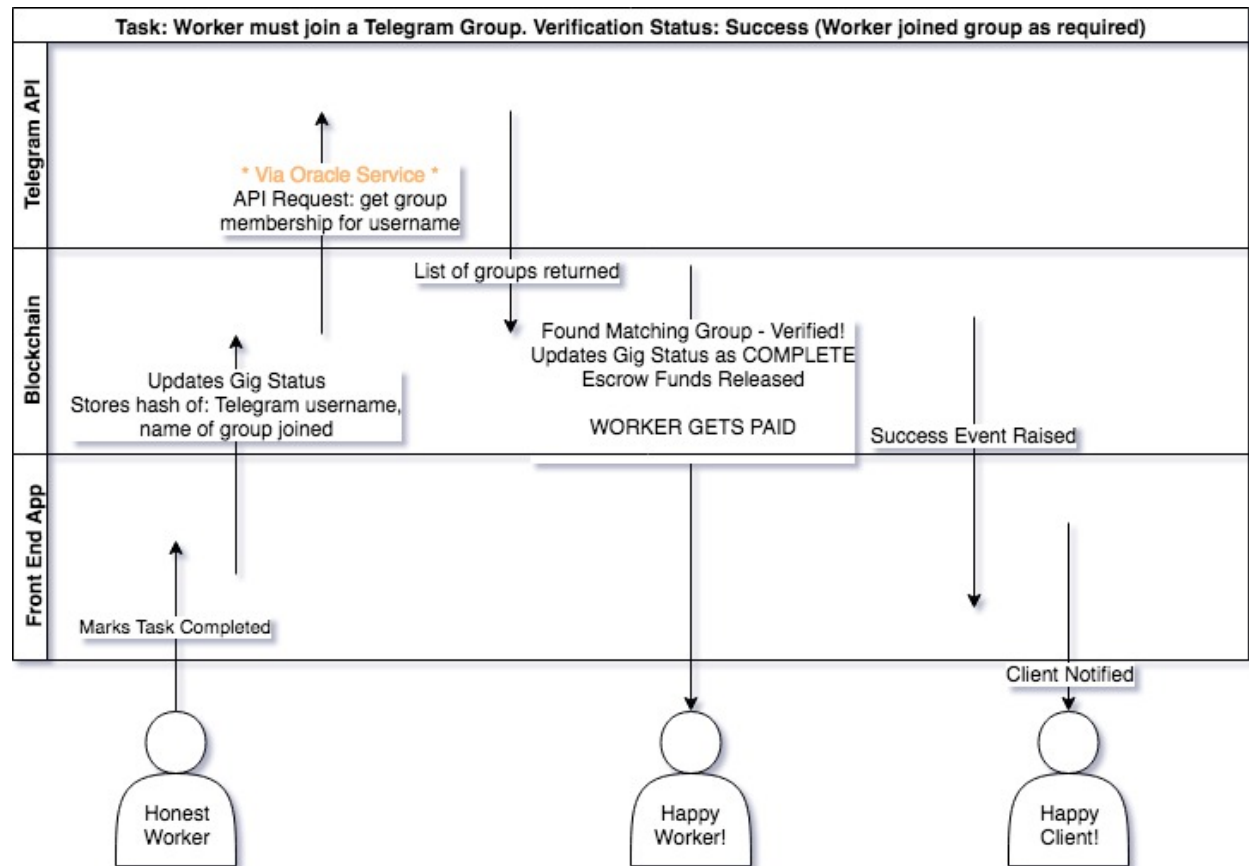
submission be rejected - this recommendation must then be approved by a third party who knows neither client nor worker in order to become binding (and therefore refund the client's money). If the arbitrator *disagrees* with the recommendation, the worker is paid anyways, regardless of the client's desire to withhold payment.

For low value, relatively simple tasks (such as the photo gig described above), any community member is qualified to be the arbitrator; when the stakes are higher, or specialized knowledge is involved, the dispute resolution system may place restrictions on *who* can act as arbitrator, or *how many* arbitrators must evaluate the work before their votes to accept or reject become valid. Arbitrators are paid for their services according to the complexity of the gig they are being asked to verify; the Yeek Platform algorithmically determines this based on monetary value, type of submission required, and other quantifiable factors.

Use Case 2: Transaction Flow For API-Verified Gigs

The Yeek Platform will support auto-verification whenever possible. We will start off by integrating with Facebook, Twitter, Telegram, and other common social network APIs to provide automatic verification for gigs involving simple tasks on those platforms: for example, "Join our Telegram group @abcdefg, get 50 Hamstercoins". The worker would add their Telegram username to their Yeek profile (if they had not already done so), join the Telegram Group @abcdefg, and get paid immediately after doing so. The client would be secure in knowing that the worker had *actually* joined the Telegram group and not just pretended to do so: after the worker indicated that the task was

complete, the Yeek Platform would query the Telegram API to confirm that the worker's

Telegram Username was, indeed, a member of the group.

| Task: Worker must join a Telegram Group. Verification Status: Success (Worker joined group as required) |

Telegram API

* Via Oracle Service *
API Request: get group membership for username

List of groups returned

Blockchain

Found Matching Group - Verified!
Updates Gig Status as COMPLETE
Escrow Funds Released

Updates Gig Status
Stores hash of: Telegram username,
name of group joined

WORKER GETS PAID

Success Event Raised

Front End App

Marks Task Completed

Client Notified

Honest Worker

Happy Worker!

Happy Client!

The diagram above focuses on this auto-verification flow after the worker has

completed a gig; all other aspects of the transaction flow are the same as described in

the manual verification flow ("Use Case 1").

Business Model and Revenue Sources

The Yeek Platform will deliver profits to all stakeholders from day 1, thanks to the

following revenue sources.

- Transaction Fees: A small, fixed percentage of each gig's value will be charged by the platform once the gig is complete and the money flows from client to worker. The exact value is not yet determined but will be competitive with other distributed marketplace applications and will be no greater than 3% in any case. We anticipate that transaction fees will become the primary revenue generator as the community size and transaction volume grow. Transactions fees are the most common way for a marketplace to generate revenue and this revenue model has been proven by nearly all of the popular platforms, centralized or not; we assume you are familiar with this revenue model and will not discuss it further.

  - As gigs on the Platform will be funded in a wide variety of cryptocurrencies / tokens (as well as in major, liquid currencies like ETH), the Yeek Organization will automatically build a portfolio consisting of the hottest new crypto tokens. There exists the potential for substantial returns - in effect, the Yeek Organization receives an automatic Airdrop of every token that is transacted on the platform, in the form of transaction fees.

- Paid Placement & Premium Features: Clients will have the option to pay an extra fee to ensure that their gig is prominently displayed in listings and search results. The cost will vary based on supply (of premium listing slots) and demand for this inventory. While the revenue generated from

paid placements will likely be small at first, it will play an increasingly important role as the number of open gigs grows large enough that workers see only a fraction of what's available.

- Software-As-A-Service, White Labeling: The crowdsourced dispute resolution system will be made available in API form to 3rd party platforms who require this functionality and desire access to Yeek's pool of talent and it's experienced dispute resolution volunteers - but as part of the flow of their own application. API Customers will pay a fee for each item added to the Yeek arbitration queue that covers the payment to the arbitrator plus a small additional charge. This will allow us to profit from the transaction volume of our already-established customers even in early days when the Yeek community is relatively small.

  o We will consider entering into customization and support agreements with API customers or anyone else that wants to integrate Yeek's functionality into their own apps. Yeek itself is 100% open source; however, there is significant revenue potential from customizing the software to meet customer requirements.

The YEEK Exchange - Phase II

Workers who earn tokens on the YEEK Platform will likely want to sell them at some point in time, in exchange for a common, liquid currency such as Ethereum or Bitcoin - or in exchange for another token that they find useful (or a good investment).

Whether they sell them immediately upon receiving them or hold their tokens until market conditions are right is a choice that is their's to make; the Yeek Platform, therefore, will provide the appropriate facilities for managing one's token portfolio and trading tokens with minimum friction.

Tokens will be stored in the user's Ethereum wallet of choice. The Yeek Platform will integrate with the user's wallet and provide the UI to display a user's holdings, provide price information, send tokens to others, or place orders on the Yeek Exchange.

The Yeek Exchange, to start, will be a simple, efficient, and secure ERC20 Token Exchange with the order book stored in an open source Smart Contract. Future releases will include the ability to trade non-ERC20 cryptocurrencies such as Bitcoin, Litecoin, and a plethora of tokens that are based on non-Ethereum Blockchains such as Waves. We plan to support this by integrating with the APIs of major exchanges and token platforms (such as the Bitfinex FIX API or Waves API) and also by directly connecting to non-Ethereum blockchains that host important cryptos / tokens that the Yeek Team or Yeek Community believe are worthy of listing on the Exchange.

The Exchange will go live in the summer of 2018. We envision this frictionless integration of an exchange into the Yeek ecosystem will facilitate transactions of the sort never seen before. For the first time, there will be an active, liquid marketplace to support the trading of what would otherwise be lesser known utility tokens, but ones that are extremely useful: as an example, I might trade 10 CHEVRON tokens for 1 5G token because I don't have a car, but would find an hour of 5G internet service to be extremely useful (the token names here are made up for the purpose of this whitepaper)

Project Timeline: 2018

June

Alpha Platform Launch
Early adopters join the community, Yeek posts 1 million YEEK tokens as rewards for helping grow the community.

July

Community Growth
Marketing efforts intensify, development begins on Yeek Platform Beta, YEEK Token listed on selected crypto exchanges

August

Beta Launch
The Yeek Platform is now stable and has the features needed to support rapid growth and a diversity of clients and currencies

September

Yeek Exchange Launch
All tokens distributed via the Yeek Platform will be tradeable on the Yeek Exchange, Q3 Rewards distributed.

December

Q4 Rewards Distributed
Platform & exchange revenues from Q4 will be quantified and distributed to YEEK token holders proportionally.

The YEEK Economy Token & the "Free ICO"

To facilitate the completion of the Yeek Platform and the growth of the Yeek Community, the Yeek Organization has released it's own ERC20 Token (symbol: YEEK). It is a standard token built with best practices as recommended by the Ethereum Foundation;

it has the special feature of being a "proof of stake" token - each quarter, a bonus will be allocated to all token holders proportionally, total amount dependent on the revenue generated by Platform Transaction Fees.
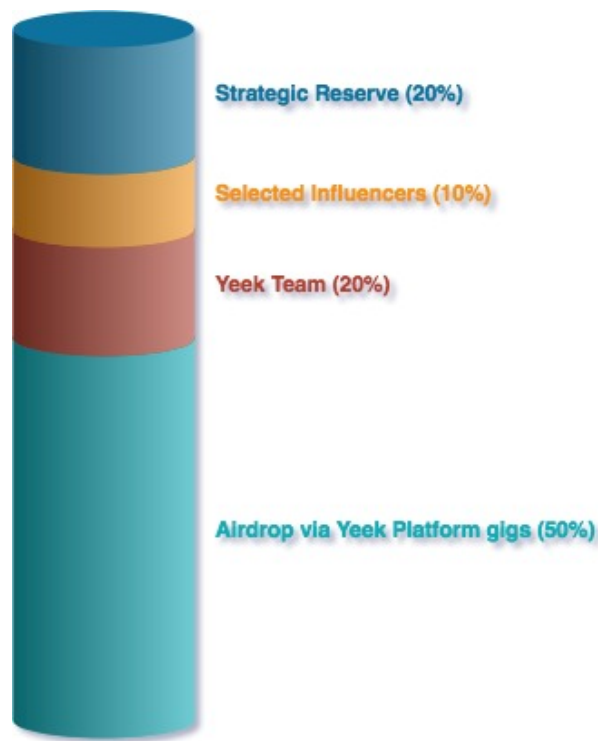
Starting June, 2018 when the Yeek Platform Alpha goes live, we will be posting gigs on the platform that represent tasks we need done, mostly of a technical, creative, or marketing nature, and of varying complexity / value. These gigs will pay workers in YEEK Tokens (the amount to vary based on task complexity and expertise required). Note that YEEK Economy Tokens will **not** be offered for sale in a traditional "crowdsale" - they will be given away to community members who complete tasks on the Yeek Platform or used internally; we envision that a major use case for the Yeek Exchange will be the convenient trading of YEEK tokens. Tokens will also be tradeable on major cryptocurrency exchanges that support the ERC20 standard.

Two million total YEEK Economy Tokens have been issued, and the supply is finite. Of these, one million (50% of total supply) will be used to fund gigs on the platform - gigs that when completed will improve some aspect of the Platform or contribute to the

growth of the Community. The remainder will be distributed amongst team members, hand-picked influencers, or kept in reserve as shown in following token allocation diagram.