

BERYL FINANCE

Daniel Ali Kayode

Ayuba Ezekiel

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Abstract

Beryl finance is a JobFi and Micro-finance project on the Algorand blockchain. The purpose of beryl finance is building a decentralized platform for freelancers and recruiters and also build an enabling environment for SMEs following the micro-finance banking model on the Algorand blockchain to enable cheap transactions and mitigate scams through the use of smart contract on a decentralized application. In this whitepaper, we present a freelancing platform operating on a decentralized network (referred to as “Beryl dApp”, or “The Platform”). The Platform is built on a blockchain and includes a protocol token called Beryl Token which users such as freelancer can utilize for job application and creation and also earn through offering support to the beryl project. The protocol used on the dApp is unique and developed on top of the Algorand blockchain, which is one of the most well-known and secure blockchains for smart contracts and decentralized application development.

Introduction

Remote work generally refers to organizational work performed outside of the normal organizational confines of space and time ¹. More than 1 in 3 Americans freelanced this year. Over the last five years, people are increasingly making the choice to freelance, and the freelance workforce has grown by 3.7 million to 56.7 million Americans freelancing today ². Beryl finance is a JobFi project building a decentralized platform for freelancers and recruiters on the algorithm and blockchain to enable cheap transactions and mitigate scams through the use of smart contracts on a decentralized application. The platform's future plan is to incorporate micro-finance banking model to support small-to-medium enterprise (SMEs) following plans of adoption of blockchain by the Nigerian government, hence the word beryl 'finance'.

The practice of microfinance is not new in Nigeria. Nigerians have always tried to provide themselves with needed finances through informal microfinance approaches like self-help groups (SHGs), rotating savings and credit associations, (ROSCAs), accumulating credit and savings associations (ASCAs) and direct borrowings from friends and relations ³. A large number of governments in developing countries have attempted to decentralize development planning and management responsibilities during the past decade.

Decentralization has taken a number of forms--deconcentration of functions within the central bureaucracy, delegation of semi autonomous or quasi-public corporations, devolution to local governments, and the transfer of functions to non government organizations. The results have been mixed. In some countries decentralization has resulted in greater participation in development activities, more effective and efficient administration of local and rural development programs, and expanded administrative capacity outside of the national capital. But in nearly all countries where government have attempted to decentralize, they have faced serious problems of implementation ⁴

1 Margrethe H Olson and New York, 'REMOTE OFFICE WORK : CHANGING WORK PATTERNS IN SPACE AND TIME', 26.3 (1983).

2 Commissioned by Upwork and Freelancers Union, 'Freelancing in America : 2018', October, 2018.

3 Ikechukwu A. Acha, 'Microfinance Banking in Nigeria : Problems and Prospects', *International Journal of Finance and Accounting*, 1.5 (2012), 106–11 <<https://doi.org/10.5923/j.ijfa.20120105.04>>.

4 Patrick Ong and Scott Fritzen, *Decentralization in Developing Countries*, *Encyclopedia of Public Administration and Public Policy*, Second Edition (Print Version), 2007 <<https://doi.org/10.1201/noe1420052756.ch96>>.

Beryl dApp

Freelancers and startups could provide each other with promising opportunities that lead to mutual growth, by improving software development metrics, such as cost, time, and quality⁵. This is at first a web app created with a mediating factor between the freelancers and recruiters or clients coupled with a dashboard for each connected wallet address, each respected dashboard consist of transactions history, active jobs, completed jobs, appealed jobs, applied jobs and created jobs.

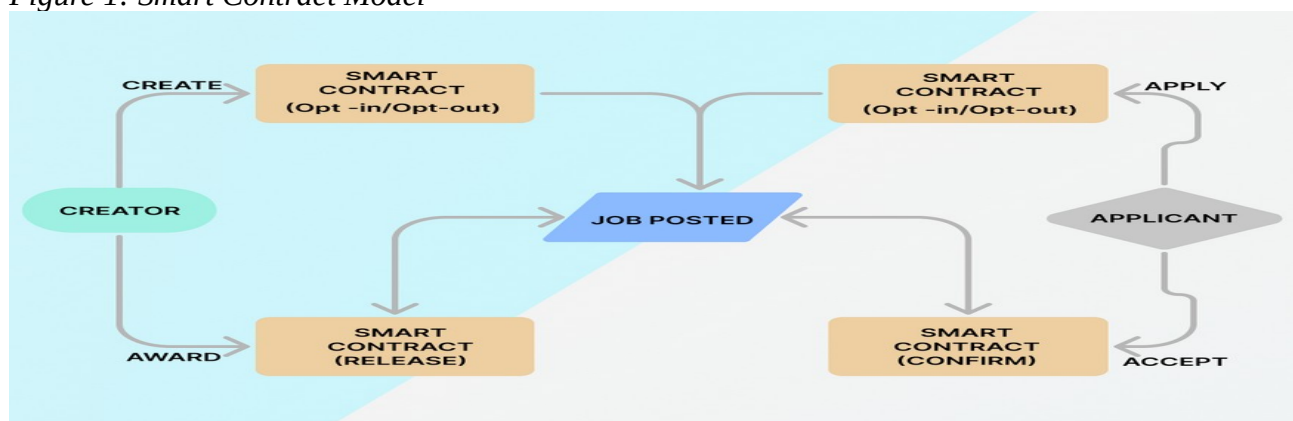
With freelancing is marred by online scams, payment hurdles and cuts by middle men known as financial institutions in all breeds distrust. The web app solves all this issues in a unique way allowing funds to be released directly to a client's wallet with absolute speed.

Many freelancing platforms like Upwork, fiver, indeed e.t.c offer great services to their users but are marred by complains from job seeker or recruiters getting scamed, reversed payments by paypal after job completions and payment release within some period of time, enormous transaction fees by the freelancing platform, payment delay, cost for job creation and application, endless identity verifications and sometimes freelancers face a problem of drop in monetary value with respect to currency conversion platforms among others. Our dApp is transparent allowing job offers and payments through a blockchain to remove enormous middlemen charges, mitigate scams with the use of smart contracts and enable fast and cheap transactions.

Smart Contracts

The term “smart contract” was first coined in mid- 1990s by computer scientist and cryptographer Szabo, who defined a smart contract as “a set of promises, specified in digital form, including protocols within which the parties perform on these promises⁶.”

Figure 1: Smart Contract Model



5 Varun Gupta, Jose Maria Fernandez-crehuet, and Chetna Gupta, 'Freelancing Models for Fostering Innovation and Problem Solving in Software Startups : An Empirical Comparative Study', 2020.

6 Shuai Wang and others, 'Blockchain-Enabled Smart Contracts: Architecture, Applications, and Future Trends', *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 49.11 (2019), 2266–77
<<https://doi.org/10.1109/TSMC.2019.2895123>>.

Figure 1 shows four(4) components which are the creator, applicant, smart contract application and the posted job. A creator creates and award a job to an applicant while an applicant apply and accept a job offer, upon milestone or job completion, the creator releases and the funds on the escrow are sent to the applicant awaiting confirmation.

Other components of the system note worthy are appeal and contract or job termination, both creator and applicant can appeal to an unfavourable or favourable condition if need be and upon dissatisfaction due to incompetency or other reasons, the creator can terminate a certain contract as the system payment mechanism is based on milestone to checkmate incompetency. In general, the system follows the Upwork model, also similar to yieldly's opt-in/opt-out method and binance P2P transaction mechanism of release and confirm.

V1.0 Release

This follows of a roadmap of Q3 2023 as the date for its official release, this roadmap can be found at <http://www.beryl.finance/> .

The Beryl Token (BRL)

The beryl token is not an investment token, their purpose is to be used on beryl dApp as a means of requirements for job creations and application, beryl token are offered as rewards for support and may be spent without restriction on the Algorand blockchain.

Tokenomics

Beryl token governs monetary activities when interacting with some parts of the dApp as one of the requirements for job creation and application for both freelancers and recruiters to drive utility. Upon securing a job or contract, the tokens committed to the smart contract for job application or creation will not be returned, their usage shall be determined through a governance vote by our community participants quaterly, otherwise when the job is not awarded to the applicant, applicant's tokens are returned.

The Beryl token is an atomic unit of value exchange within the platform, creating a transactional economy between clients, freelancers, and other players. Users may earn Beryl tokens and spend them on services provided by the Beryl Platform. Participants earn Beryl through support or performing active work (actual work and activities) or delivering services to the Network (for example, rating or curating data)

Sustainable Distribution and Supply

The beryl token has a total supply of one billion (1,000,000,000) and follows a tokenomics distribution in table 1.

Table 1: Token Distribution

| | |
|---------------|-----|
| IDO Launchpad | 30% |
| Staking | 30% |
| Marketing | 10% |
| Development | 20% |
| Rewards | 8% |
| Team | 2% |

Payment Mechanism and Liquidity

The lack of market liquidity impacts blockchain freelancers as well, because they are normally paid in tokens, and only if the project generates enough worth through a successful ICO. Freelancers on specialist platforms such as BitcoinTalk must cope with different projects, coins, and wallets. If a project fails or a token is not listed on a major cryptocurrency exchange, they may wind up working for free. In case were beryl token is used as a payment, we provide a standardized payment method for blockchain freelancers (“Freelancers”), as well as a strategy to assure Berly token market liquidity at cold start.

Network Quality Control

This are security measures and procedures taken to ensure that the quality of our product remains decentralized and acceptable.

User Verification

Beryl with respect to the freelancing dApp does not require any KYC for job applications or creations but github and emails are required as also recruiters might require or ask for some proof of competence on a job posting.

Network Reputation

A reputation system, in general, evaluates how much an individual is trusted by a community. It should be based on the prior transactions and interactions of the participant with other players. The stronger a person’s reputation on The Network, the more other users are ready to communicate and transact with that participant, and the more she will have to behave honestly.

Internal Scoring

An internal scoring algorithm is used to rate all Beryl participants. This rating should be made public and calculated using a variety of characteristics such as their platform reputation, number of followers, and level of verification of their profile.

Transaction limits

- Unlimited transaction limit for registered users

Business Model

The Beryl Network is a Nash-equilibrated system where each participant is Incentivized to play by the rules:

- Clients pay freelancers for the services they provide by milestone.
- Beryl, which serves as a facilitator and escrow agent, receives 0% share of each transaction for completed, or applied instead when a job is awarded, the tokens used for the application are not returned but if not awarded, the tokens are returned to its owner.
- A small amount of token is required for job creation to tackle abuse of the dApp.

Beryl Micro Finance

Microfinance banks were founded because of the perceived deficiencies in the existing financing schemes for the poor and small businesses. They were licenced to begin operations in 2007 and existing community banks and NGO microfinance institutions that met the conditions spelt out by CBN for licencing were allowed to transmute into microfinance banks ⁷. Unlike the community banking policy framework which compulsorily confined all community banks to unit banking, the microfinance banking guideline permitted the branching of microfinance banks within a state ⁸.

The micro finance lending protocol allow the less priviledged to easily access funds for his/her business following an agreement. This same protocol will be simplified on the blockchain with documents attached, transaction IDs tied with agreement of consent in such a way that any entrepreneur with phone and access to the dApp can easily get support.

7 Ikechukwu A. Acha, 'Microfinance Banking in Nigeria : Problems and Prospects', *International Journal of Finance and Accounting*, 1.5 (2012), 106–11 <<https://doi.org/10.5923/j.ijfa.20120105.04>>.

8 Acha.

Figure 2: *forex.in.rs* Micro Finance Banking Model

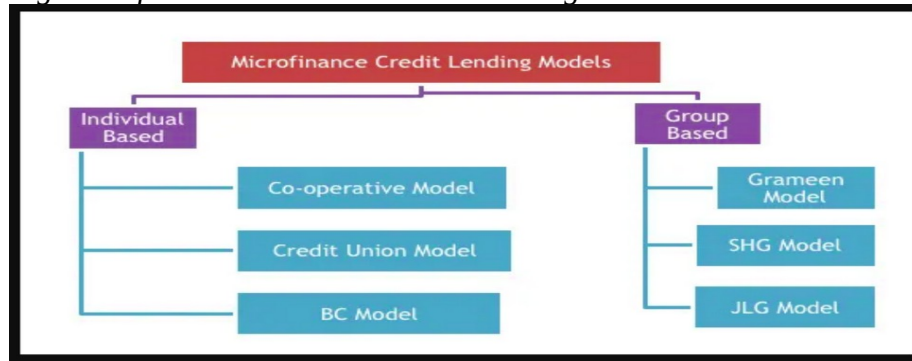


figure 2 show a micro-finance lending protocol taken from *orex.in.rs* , this approach is interpreted into a software as much detailed explanation will be added when releasing beryl 2.0 in the future.

Conclusion

This whitepaper introduced beryl as a platform and company creating solutions for freelancing and micro-finance on a blockchain technology, the way users utilize cryptocurrencies has evolved. Using this technology to tackle real-world challenges is the real thing. Implementing initiatives based on this technology may result in widespread acceptance of cryptocurrencies and blockchain technology. Beryl is establishing a mechanism to get employment online without the hassle of a centralized third-party platform.