Lona – A Blockchain Based Collateral Management System

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Abstract

Current Financial Loan Management system of various corporations are very inefficient, cumbersome and difficult to audit, which translates into a high interest rate per a small loan amount. To overcome these challenges, we propose Lona, a blockchain based loan management system based on a smart contract over permissionless blockchain Ethereum.

Keyword: Blockchain, Financial loan, Ethereum, Solidity

1. Introduction

Ethereum is a decentralized, open-source blockchain featuring smart contract functionality. Ether (ETH) is the native cryptocurrency of the platform, it is the second-largest cryptocurrency by market capitalization, after Bitcoin. Ethereum is the most actively used blockchain.

Lona is based on Ethereum because it offers a lot of features like robust smart contract development tools, highly secured environment, most actively used, low latency, fault tolerant.

The major contributions of this paper are summarized as follows:

* We propose a novel design of a collateralized loan management system based on a smart contract with the Ethereum Blockchain.
* We design a web app that enables the transfer of money from the loan provider to the loan receiver.
* Based on the Ethereum blockchain, we introduce a smart contract written in solidity for the atomic tracking of loan receivers and storing of collateralized assets.

2. What is Lona?

Lona is a collateralized loan management system that aims to improve the service of providing financial loans and also the management of the loans. We achieve this by using Ethereum smart contracts to keep tracks of loan users and also to hold and store collaterals in a safe, transparent and secure way.

The collaterals edict is always a monetary value which is a percentage of the loan amount requested, the percentage is also defendant on how reliable and trustworthy the customer is this New system helps to make receiving of collateralized loan easier, cheaper, faster, and also makes the management system more secure, more transparent and more reliable.

3. Economic Impact

A platform like Lona does not simply exist in isolation. It exists as part of a live ecosystem, and itself impacts the broader financial loan provision space and the blockchain community in a number of ways.

Lona acts as a mechanism for onboarding, regular people who seek loan to blockchain, and specifically Ethereum. There is a dear incentive for loan seekers to be part of the blockchain community at large due to the availability of easy funds and the security which the blockchain possesses that makes it safer to store and retrieve values. Lona provides a web app for loan seekers to easily get involved in the financial aspect of the blockchain community and offers some the first time exposure to the benefits of the blockchain at large.

4. Definitions

Actors

Loan Seekers

Loan Seekers are both individuals and Organisation that wants to acquire Financial loan on the platform. Their collateral assets are stored on the platform in the form of lona tokens, which have a value that is pegged to the Naira(NGN).

For more you can see the smart contract that enables this possible at http://www.github.com/<repo-name>.

Platform

These consist of a web app, smart contract and REST server. It enables loan seekers to acquire loans from the Lona corporation. The platform would be owned and controlled by Lona cooperation. For a demo of how it works, you can visit http://herokuapp.com/

Lona Corporation

This is the corporation that provides which the loan seekers acquire through the platform, the cooperation can be a for profit or a governmental cooperation setup to provide cheap loans to the public.

Token

Lona (LOA)

Loan seekers collateral values are stored as Lona tokens as a result of argue loans from the platform. It assures the holders that once his loans are repaid he would get his collaterals. Please note that collaterals are monetary assets (cash) that are converted to LOA tokens once a loan seeker’s request for loan are approved.