RealSmart : Putting Real-Estate on the Blockchain Using Smart Contracts

Arunabh Das	David Smith	Steve Galati
das@rndflo.com	david@rndflo.com	steve@rndflo.com

Introduction

This whitepaper prescribes an architecture for a suite of decentralized apps that enable the creation, deployment, maintenance and management of smart-contracts for allocation and management of a variety of real-world asset classes, using real-estate as the base reference case.

Background

The current state of the real-estate world involves middlemen that consume a large percentage of the value associated with commercial and residential real-estate.

Problem Statement

Currently, the following problems exist in the real-estate market :

Large groups of middle-men sit between the buyer and the seller of the property that consume a large percentage of the value that should ordinarily belong to the seller and get transferred to the owner along with the lien on the property from the mortgagee to the mortgagor.

The securitization of the mortgage on the property and the associated terms and obligations is not transparent in a way that is easily understandable for the buyer and this has resulted in severe economic collapses of the housing, financial and banking sectors in the past (circa 2008)

There are high transaction fees and other costs associated with the transfer of ownership of the property and the title for the property.

The data and property history of the property is not currently owned and managed by the owner of the property in a way that makes it possible for the property owner to monetize the data, metadata and property history for the property.

Mortgage payments and payments to contractors for renovation on the property is not recorded on the property history associated with the property.

There is currently no way to translate the legalese associated with property contracts into language that is understandable for the average end-user.

There is no incentive for property developers to perform deficiency management tasks during construction and renovation projects in an adequate and satisfactory manner.

Solution

The RealSmart platform aims to eliminate middlemen associated with the construction, sale, renovation and management of properties by providing a direct way to manage the property lifecycle using the RNDflo suite of decentralized apps.

The RealSmart platform aims to utilize smart contracts to securitize the mortgage and lien on the property rather than by using other traditional financial instruments which have led to economic collapses of the housing, finance and banking sectors in the past.

The RealSmart platform aims to lower transaction fees by leveraging the power of the Ethereum blockchain to record transactions related to the construction, maintenance, renovation and management of commercial and residential real-estate properties.

The RealSmart platform aims to empower property owners and mortgage holders by giving them ownership of the data associated with the property. The data will be encrypted and stored on the blockchain and is able to be monetized by the property-owner rather than by third-parties such as social media companies.

The RealSmart platform aims to create decentralized apps (dapps) that incentivize all stakeholders including property-owners, contractors, property managers, buyers and sellers to request specific data regarding the property history from the property owner. Upon authorization by the property-owner, this data (which is still owned by the property owner) is able to be accessed for a limited period of time by the potential buyer of the property or motivated bidder or other stakeholder.

The legalese associated with contracts is translated into smart-contracts by Obelix, RNDflo's backend, which is able to create, maintain, deploy and manage smart contracts on the blockchain.

The RNDflo suite of decentralized apps (dapps) incentivizes property developers to take deficiency management seriously by gamifiying the process of deficiency management and rectification using smart- contracts as the mechanism for gamification.

Vision

RNDflo is currently developing a platform called RealSmart and a suite of decentralized apps that are powered by RNDflo smart-contracts and currently undergoing beta-testing.

The RNDflo suite of blockchain-based apps make real-estate development and investing accessible to anyone with a smartphone.

By tracking improvements to properties in their portfolio, property owners, property managers, buyers, sellers, contractors and sub-contractors are able to track property history, property values and market price information in order to maximize yields from their investments.

The secure tokenization of properties and tracking of property-history and property-values is done on the blockchain in a secure, encrypted manner in order to ensure data privacy and security for all parties during the construction, sale and renovation of the property.

Summary

The RNDflo suite of decentralized apps (dapps) in conjunction with the Obelix-powered sidechain and enhance by GetReal tokens enable a less onerous process throughout the lifecycle of a property, whether that be a piece of commercial or residential real-estate.

The RNDflo suite of apps are powered by enterprise-grade encryption and secure protocols in order to ensure peace of mind for property-owners, contractors, property-managers and real-estate agents, brokers and lawyers.

The RNDflo suite of apps enables management of real-estate construction, renovation, staging and management of projects using smart-contracts on both private and public blockchains.

The system of utility tokens, known as GetRealTokens (GRTOK) and smart- contracts generated by Obelix (RNDflo Smart-Contracts Backend) enables property-owners, managers as well as other stakeholders to track and manage the entire lifecycle including construction, staging, sale, lease, renovation and management of the property.