



Real-Estate Asset Management & ICO using Ethereum Blockchain

Business:

Blockchain, ICO

Domain:

Real Estate Asset Management

Tools:

Ethereum, PHP/ JavaScript, Web3, Solidity

Key Highlights

Key Success:

- » Close to \$6 Million was raised through the Initial Coin Offering.
- » Increased liquidity by securitization of illiquid real estate assets.
- » Transaction time & costs were considerably lowered and transparency improved owing to the distributed ledger and bypassing real estate agents.

Engagement:

Offshore engagement with:

- » 1 Blockchain Architect
- » 2 Engineers
- 3 months - Ongoing

Client

A Technology Company focusing on the Real Estate industry wanted to connect real-world assets through the Blockchain network and make it accessible for micro-investors worldwide to invest in assets in entirety or in fragments

Overview

Given the nature of the real estate business-high upfront capital requirements, high transaction costs associated with brokers, complicated regulatory paperwork etc.- the real estate market has become synonymous with illiquidity. Indium Software's Blockchain solution:

Created a platform for an Initial Coin Offering (ICO) using ERC20 tokens

Recorded and expedited the real estate investment process in a transparent and immutable way, thereby reducing paperwork

Enabled real estate investors to transact in fractions of properties on an online marketplace.

1 Challenges

- » Real estate investment involves a lot of money, as there is no option to own a fraction of a property, thus making it unaffordable for a vast majority of people.
- » High transaction cost being paid to agents and brokers, for the closure of deals, adds to the investment costs.
- » A huge amount of paperwork in the current system consumes a considerable amount of time and burden for the related parties.
- » There is a severe lack of transparency and difficulty in maintaining the immutability of records in the system.

2 Need For Blockchain

- » To record and expedite the real estate investment and operations process, in a transparent and immutable way.
- » All parties involved in the process are brought together under the same network.
- » Reduced paperwork and back-and-forth communication significantly reduce the time and related costs.

3 Key Requierments

- » Create a platform for Initial Coin Offering (ICO) using ERC20 tokens.
- » Provide a user interface for buyers and sellers to meet and transact in the same network.
- » Transfer of ownership in a secure and transparent manner, using the Blockchain infrastructure.

4 Approach and Implementation

- » User registration and dashboard features were implemented in a web application using PHP with MySQL backend database.
- » Users register using the Sign Up page into one of the following categories:
 - Buyer
 - Seller
 - Affiliate
 - Investor
- » Asset management functionalities for the admin user(s).
- » User registrations are backed by KYC verification.
- » Investors can buy tokens for assets and are entitled to profit/ dividend.
- » A buyer can buy a property in its entirety or a portion of it. Tokens will be transferred according to their stake in the property.
- » Users will buy and sell their assets through the platform.
- » All assets will be managed within the platform an 80% of the profits will be returned to affiliates on pre-defined intervals.
- » Smart Contract was written in Solidity for:
 - Token Creation
 - Token Transfers
 - Asset Creation
 - The transaction between Buyer and Seller
 - Processing of Dividend Pay-outs



5 Business Impact

- » Close to \$6 Million was raised through the Initial Coin Offering.
- » Transaction costs were considerably reduced, since the platform provides a direct link between the buyer and the seller, bypassing agents and brokers.
- » Faster transaction processing due to distributed technology and data being available quicker.
- » The approval process is faster as all the parties are connected to the same platform/ network.
- » Transparency and security of transactions were greatly improved as every event is recorded on the Ethereum Blockchain.



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