

Real Estate Management System with Blockchain and Augmented Reality

Introduction:

The real estate industry faces challenges in terms of trust, transparency, and efficiency. Traditional processes for buying, selling, and managing properties often involve intermediaries, complex paperwork, and delayed transactions. The REMS project proposes to overcome these challenges by integrating blockchain and augmented reality technologies into a comprehensive real estate management platform.

Objectives:

The main objectives of the REMS project are as follows:

To create a secure and transparent platform for real estate transactions using blockchain technology.

To enable buyers and sellers to interact through a chat app, facilitating direct communication and reducing delays.

To showcase properties using AR/VR, allowing potential buyers to virtually explore properties without the need for physical visits.

To highlight the best agents on the landing page, promoting fair competition and providing users with a curated list of top-performing agents.

System Architecture:

The REMS system will be designed as a decentralized application (DApp) built on a blockchain network. The architecture will comprise various components, including:

Smart Contracts: Deployed on the blockchain to manage property listings, transactions, and payment processes securely.

Property owners can list their properties on the platform through smart contracts.

Each property listing will include essential details, images, videos, and documents stored securely on the blockchain.

Blockchain ensures that property information is tamper-proof and transparent.

Backend: Manages the overall system, user authentication, and integrates blockchain with the front-end.

Frontend: Provides a user-friendly interface for buyers, sellers, and agents to access the platform's features.

AR Integration: Utilizes AR/VR technologies to enhance property viewing experiences for potential buyers.

Chat App: Facilitates real-time communication between buyers, sellers, and agents.

Users will have access to a built-in chat application for direct communication with other parties involved in a transaction.

Real-time messaging will improve responsiveness and reduce delays in the negotiation process.

Best Agent Feature:

The platform will utilize data analytics to identify and showcase the top-performing agents based on their track record, customer reviews, and successful transactions.

This feature will assist users in making informed decisions when choosing an agent.

Why do we use blockchain? –

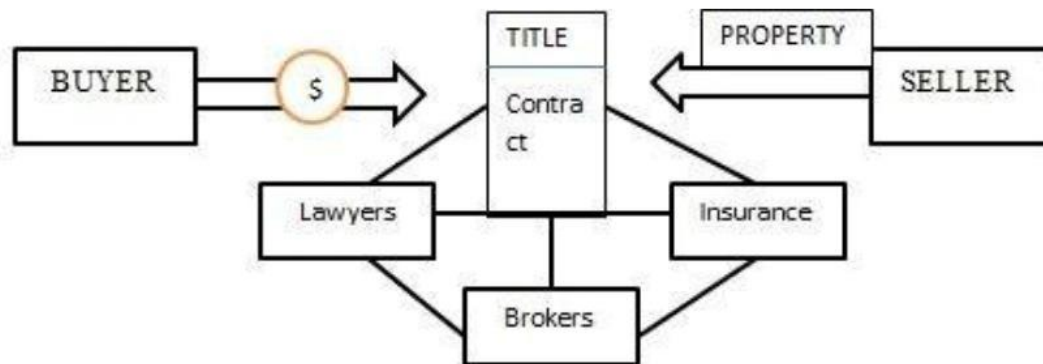


Fig. 1. Land transaction without blockchain.

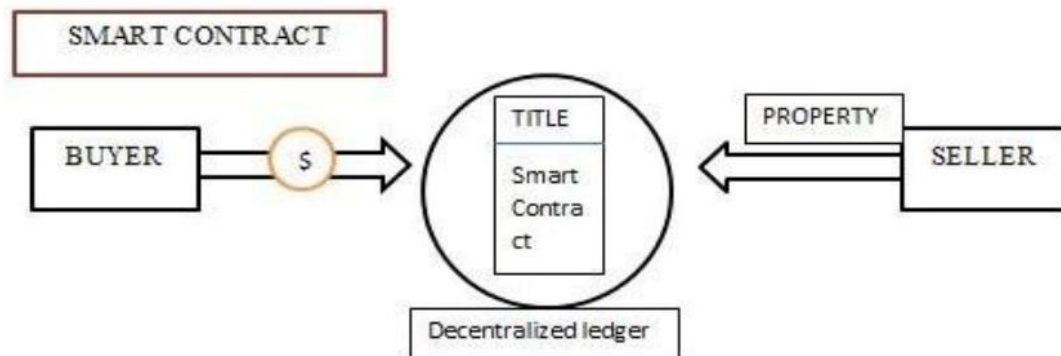


Fig. 2. Land transaction using blockchain.

IEEE Papers –

1. Decentralized Chat Application using Blockchain Technology-
Authors: Keshav Khalkar, Nikhil Dhake, Sarwesh Kelzarkar, Tejas Shinde
2. Real Estate Management System using Blockchain-
Authors : Ankit Mittal , Bhavyansh Sharma, Pinku Ranjan
3. Blockchain in Real Estate-
Jubil Gea Joy, Mr. Kishore Sebastian