

# Integration of Blockchain in Music Industry

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## ABSTRACT

Blockchain provenance relates to the consensus-based algorithm that is timestamped and is unchangeable concerning once written data. Blockchain as a service (BAAS) has been a revolutionary concept for the music industry as it deals with cloud-based solutions to be used for creating, holding, and using the blockchain-based music and music industry on their blockchain-based apps and various blockchain infrastructure. Integration of blockchain-based music industry will lead to efficient management of copyright and online royalty of music with artist increasing revenue of original content on Netflix, amazon prime, etc. A brief of the integration music industry with blockchain has been touched on in this paper.

**KEYWORDS:** *Blockchain, Blockchain as a Service (BAAS), Music, Music Industry, NFT, Music NFT crypto, consensus-based Algorithm, timestamp*

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## I. INTRODUCTION

Spiritually Music is one of the karmas for our senses of the human body. Music is something that deals with abstract emotions of joy, sadness, happiness, love, energy, etc feelings. Music has been the hobby and mood refresher for the ceremony, festivals, people enjoying their valuable time in this competitive business environment and music-based startups/companies such as Spotify, Gaana, Jio Music, etc have been monetizing it. The music industry has been undergoing change and creativity from pop to jazz, rock to traditional music (lokgeet). Music industry giant awards are Grammy, the brits award, etc. Music may be used to communicate with people (music without boundaries). The music industry in 2021 in the United Kingdom is 1.31 billion dollars while the music market is approximately 97.24 billion pounds industry in 2030 in the world. Meanwhile, Goldman Sachs estimates 1.15 billion paid music users for streaming music by 2030.

## II. Blockchain version

Blockchain is a newly emerging field based on web3.0. The term blockchain is coined by Satoshi Nakamoto in 2008 in a paper on "Mining of Bitcoin"[1]. Blockchain is evolving from digital currency-based (blockchain 1.0), a digital economy-

based (blockchain 2.0) to a digital society-based (Blockchain 3.0) [2-9]. This has increased the number of transactions per second from a few tps to 1,700 tps (PayPal). The integration of the music industry with Blockchain will lead to a transparent peer-to-peer transaction with safe ownership of music data & music-related transactions also. Blockchain as a service (BAAS) makes Blockchain accessible to everybody. BaaS is a cost-effective choice. Customers and staff will benefit from improved data privacy and security. In BaaS, the Compatibility software is ready and simple to use. BaaS gives businesses immediate scalability. BaaS enables blockchain-based data access from BYOD and afar [10].

## III. Integration of Blockchain in the music industry

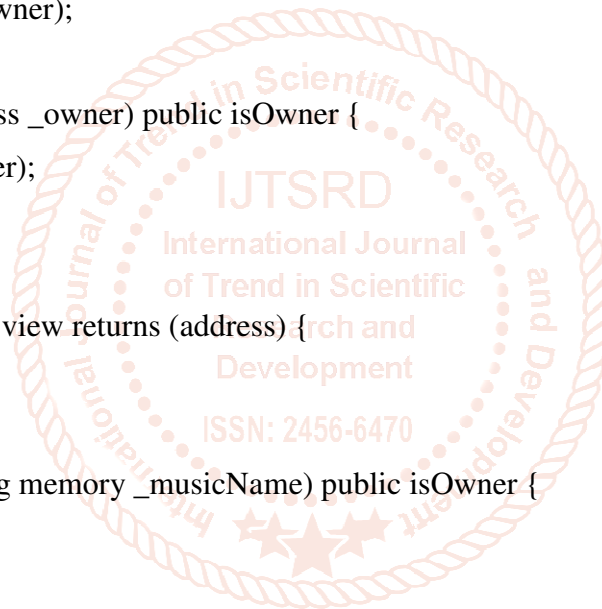
The NFT known as a nonfungible token is a class of Blockchain that has been used to develop a new monetization model/ method for digital assets for music, art etc. The music NFT crypto is a new type of media format that has been created by the integration of Blockchain in the music industry [11]. This has been a huge revenue generator for new artists and modern music companies. The Smart contract for Genuine Music owner is discussed.

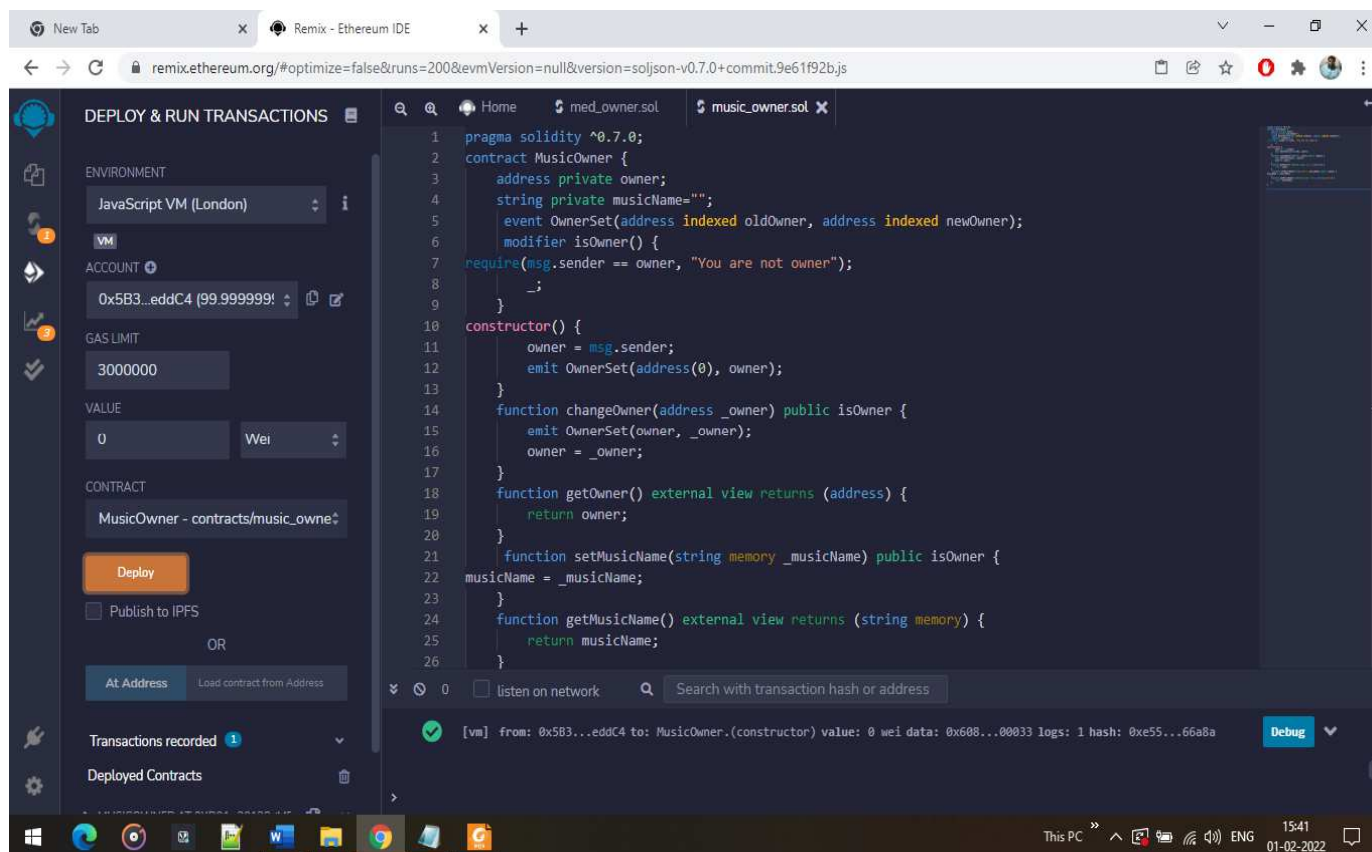
**SMART CONTRACT FOR GENUINE MUSIC**

A template of smart contract of Music based on Blockchain in Music Industry has been provided below and its execution is shown in figure 1.

```
pragma solidity ^0.7.0;
contract MusicOwner {
    address private owner;
    string private musicName="";
    event OwnerSet(address indexed oldOwner, address indexed newOwner);
    modifier isOwner() {
        require(msg.sender == owner, "You are not owner");
    };
}
constructor() {
    owner = msg.sender;
    emit OwnerSet(address(0), owner);
}
function changeOwner(address _owner) public isOwner {
    emit OwnerSet(owner, _owner);
    owner = _owner;
}
function getOwner() external view returns (address) {
    return owner;
}
function setMusicName(string memory _musicName) public isOwner {
    musicName = _musicName;
}
function getMusicName() external view returns (string memory) {
    return musicName;
}
}
```

Smart contract “MusicOwner” is going to protect the owner of the music and prevent its copyright violation. This Smart Contract “MusicOwner” transparently records the data for ease of access. This Smart Contract “MusicOwner” eliminates the need for a third party, thus ensuring the artist receives the entire revenue i.e., 100% income. Apple Music, Spotify is the first users of blockchain in the music industry. Music Apps stream songs, podcasts also.





**Figure 1: Smart Contract “MusicOwner” running in Remix IDE**

This Smart Contract “MusicOwner” is written in Solidity language. It has been evaluated in Remix IDE.

**Published MusicOwner's Metadata**

Metadata of "musicowner" was published successfully.

**contracts/music\_owner.sol** :dweb:/ipfs/QmUsH317F2ZVvk9KwLNM4JrApSAkAzXYgmrJ1gXkHMwqNkM  
**metadata.json**: dweb:/ipfs/QmPyAE8DYm2masQSL9Em8AVtTRXrtBUdmf75VmX9G9czK3

**IV. Advantage of Integration of Blockchain in the music industry**

The merits of integration of blockchain in the music industry are given below: -

1. Musicians can now earn fair royalty’s payments thanks to blockchain.
2. Music venues may use blockchain to combat fraudulent tickets and other issues.
3. Record labels can easily track music streaming thanks to blockchain.
4. Record labels can Pay all artists who contributed to songs or albums instantaneously with blockchain.
5. Musicians may simply approve and maintain their music copyright on a public ledger using the blockchain.
6. Music Applications can straightforwardly record each tune a user has been listens to on the blockchain for everybody to see.

**V. Conclusion**

Integration of Blockchain in the music industry by green renewable energy and music NFT crypto for a

music album, song, etc based on NFT may use Blockchain as a service. The Blockchain in music will lead to the concept of ease of access with recorded data. Thus, the application of Blockchain technology to music companies is futuristic and a must for sustainable, good quality of work-life balance in post COVID decades.

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