# Metaverse Standards Forum
# NFT Royalties: Renting

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**Status:** Approved for Public Distribution

**Version:** 1.0

| Reviewer | Due Date | Status | Contact |
|---|---|---|---|
| Digital Asset Management Working Group | June 18, 2024 | Complete | digital_asset_management @lists.metaverse-standards.org |
| MSF Domains (Peer Review) | March 05, 2025 | Complete | oversight@lists.metaverse-standards.org |
| Use Case Taskforce | May 05, 2025 | Complete | use_case_task_force@lists.metaverse-standards.org |

The purpose of this template is to provide a structured framework for collecting and documenting use cases within the Metaverse Standards Forum (MSF). Use cases are essential for understanding real-world scenarios where metaverse technologies are applied and where interoperability challenges may arise. This template guides MSF members in providing a concise yet comprehensive description of a use case, including its title, identifier, and summary. It also encourages contributors to list the benefits of the use case, identify actors or entities involved, and describe the use case scenario in detail, emphasizing interactions, challenges, and requirements. Additionally, it prompts the inclusion of relevant technical information, such as implementations, success metrics, and challenges faced. This template aims to facilitate the gathering of valuable use-case data to inform standards development and foster collaboration within the MSF community.

**MSF members and MSF Domain Groups are invited to submit use cases.**

**NOTE:** Organizations such SDOs who want to submit and add a use case would need a sponsor that is an MSF member. This process is established in order to have a contact person in MSF that can handle discussions and resolve open issues within regular meetings.

**Eligible submitters:**
- MSF Domain Groups
- MSF Members (Principal and Participant)
- External Organizations with Liaison Agreements (with the support of a MSF member that acts as sponsor)
- Standard Development Organizations (with the support of a MSF member that acts as sponsor)

**Minimum Requirements for MSF Member Submissions not part of a Domain Group:**
- Minimum required number of proposers: 3
- Minimum required number of supporters: 5

**NOTE:** Use cases submitted by SDOs and Liaison Organizations would also need to fulfill the same requirements (and would need a sponsor) unless they are submitted by a Domain Group.

*MSF: Metaverse Standards Forum*
*POG: Pre-qualified Organizations and Groups*
*SPP: Standards Related Publications and Projects*
*DWG: Domain Working Groups*
*WG: Working Group*
*SDO: Standards Development Organization*

| Use Case Title |
| --- |
| NFT Royalties: Renting |

| Use Case Identifier |
| --- |
| MSF2024-NFTCLR-001<br>• Version 1.0<br>• Year of Release: 2025 |

| Summary of Use Case |
| --- |
| **Description**: Non-Fungible Token (NFT) Renting explores paying royalties with a mechanism where NFT owners can rent out their assets using Smart Contracts, representing temporary access rights to the NFT without transferring actual ownership.<br>**Benefits of NFT Renting:** This approach reduces barriers to entry for renters and streamlines the renting process. It also opens up new opportunities for NFT utilization across various applications, enhancing the liquidity of digital assets while maintaining security and ownership integrity. |

| Contributors and Supporters |
| --- |
| • Digital Asset Management Working Group<br>• MSF Domains (Peer Review)<br>• Use Case Taskforce |

## Keywords

NFT Fractionalization, Digital Assets, Blockchain, Interoperability, Shared Ownership

## Actors/Entities

- **Creator:** entity that originates the NFT, responsible for its initial creation and minting.
- **Wallet:** digital wallets facilitating NFT transactions.
- **NFT:** a digital asset governed by an NFT Contract.
- **NFT Contract:** various types of governing Smart Contracts for NFTs, including those that are immutable, upgradeable, and those representing real-world assets, that facilitates the rental agreement. It ensures the temporary transfer of NFT usage rights to the Renter and automates the return of these rights to the Holder.
- **Blockchain Network:** the foundational technology enabling NFT minting, trading, and royalty distribution.
- **Holder:** owner of the NFT.
- **Rental Contract:** Smart Contract that handles the renting execution.
- **Renter:** the party interested in acquiring temporary access to the NFT. They agree to comply with the terms set by the Holder for the duration of the rental period.
- **Marketplace:** online digital platforms that enable the listing, discovery, and transaction of NFT rentals. They act as intermediaries between Holders and Renters, providing a secure and standardized process for executing rental agreements.

## Detailed Description of Use Case/Scenario

**Preconditions:**
- Creator has minted NFT using System.
- Holder now owns the NFT and lists it on Marketplace.
- Marketplace is integrated with System.
- Renters are registered on the Marketplace with verified accounts.

**Main Flow:**
1. **Renter Discovery:** the Renter searches the Marketplace and identifies the NFT they wish to rent.
2. **Agreement Acceptance:** the Renter agrees to the terms of the rental, which include the rental period and fee.
3. **Rent Execution:** the Marketplace and Rental Contract processes the rental agreement, ensuring the Renter pays the rental fee.
4. **NFT Utilization:** the Renter gains access to the benefits associated with the NFT (e.g., using a virtual item in a game or displaying digital art), without direct control over the original NFT, according to the NFT Contract.

5. **End of Rental Period:** upon conclusion of the rental period, the Marketplace ends the rental agreement. The original NFT remains with the Holder, and the Renter's access rights are revoked.
6. **Royalties:** Marketplace and System ensure rental royalties are paid in accordance with the NFT Contract.

**Alternative Flow**

- **Extension Request:** if the Renter wishes to extend the rental period, they must request an extension through the Marketplace before the current rental period expires. The Holder can review and accept or decline the extension under the same or revised terms.

- **Early Termination:** the Renter or Holder may terminate the rental agreement early under specific conditions outlined in the Smart Contract. An early termination by the Renter may not result in a refund of the rental fee.

**Postconditions**

- The Holder retains full ownership of the original NFT.

## Implementations and Demonstrations or Technical Feasibility

**Examples of Rent Platforms:**

- Renfter
- IQ Protocol
- UNITBOX
- Vera
- Double Protocol
- LYNC

\* https://ndlabs.dev/fractional-nfts

## Challenges:

- **Smart Contract Complexity:** developing Smart Contracts that accurately reflect the terms of rental agreements, including duration, payment, and the conditional return of the NFT, requires careful programming to avoid exploits or loopholes.

- **Rights Management:** ensuring that renters have access only to the agreed-upon uses of the NFT while preventing them from exceeding those rights can be technically and legally challenging.

- **Dispute Resolution:** establishing clear mechanisms for resolving disputes between NFT owners and renters, especially in cases of alleged damage or misuse of digital assets.

- **Marketplace Integration:** ensuring that NFT renting functionalities are seamlessly integrated into existing NFT Marketplaces and platforms without compromising user experience or security.

- **Regulatory Compliance:** navigating the legal and regulatory implications of NFT renting, particularly concerning intellectual property rights, digital asset classification, and cross-jurisdictional transactions.

- **Security and Fraud Prevention:** protecting against potential security vulnerabilities introduced by the renting process, including fraud, theft, and duplication of NFTs.
- **Interoperability:** developing standards and protocols that enable NFT renting across different blockchains and platforms to ensure a broad and accessible Market.

## Requirements:

**Technical and Functional Requirements:**

- Development and implementation of robust Smart Contracts that facilitate the rental process, ensuring secure and automated transfer of NFT usage rights.
- Integration of rights management solutions to control and monitor the use of rented NFTs according to the terms of the rental agreement.
- Implementation of dispute resolution mechanisms within the platform or through third-party services to handle conflicts between NFT owners and renters.
- Seamless integration of NFT renting functionalities into existing and new NFT Marketplaces to enhance user experience and adoption.

**Interoperability Requirements:**

- Adoption of standardized protocols for NFT renting across different blockchains to ensure a wide range of NFTs can be rented and used across various platforms and applications.
- Collaboration with industry stakeholders to develop and agree upon cross-platform renting standards to facilitate easy and secure NFT transfers.

**Other Key Considerations:**

- **Privacy:** ensure that the NFT renting process respects user privacy, with mechanisms in place to protect personal information from unauthorized access or exposure.
- **Cybersecurity:** implement comprehensive security measures to protect against fraud, hacking, and other malicious activities, securing the NFTs and rental transactions.
- **Identity Verification:** develop reliable identity verification processes for both NFT owners and renters to prevent fraud and ensure trustworthiness within the ecosystem.
- **Networking and Latency:** optimize network performance to handle the transactions and interactions involved in NFT renting without significant delays or downtime.
- **Ownership:** clearly define and enforce the ownership rights of NFT owners throughout the renting process, ensuring they retain full control over their assets.
- **Digital Ethics:** address ethical considerations related to NFT renting, including fair use, equitable access, and responsible management of digital assets.
- **Provenance:** maintain accurate and transparent records of NFT provenance, including rental history, to ensure authenticity and ownership history.
- **Accessibility:** make NFT renting platforms and services accessible to a wide range of users, including those with disabilities, to promote inclusivity within the digital economy.

## Relevant Domain Working Group (WGs):

- NA

| Relevant Pre-qualified Organizations and Groups (POGs): |
|---|
| ● NA |

| Relevant Specifications, Publications and Projects (SPPs): |
|---|
| ● NA |

| Related Use Cases |
|---|
| ● NFT Royalties use cases are related to this use case from a classification perspective; however, they vary in topics covered. |

| Additional Comments |
|---|
| ● This document is a living artifact and may be subject to revisions on a periodic basis to reflect the future state of NFT Royalties, and or based on feedback received from MSF stakeholders that warrants an update in the future. |