Regardless Minting Protocol

A decentralized minting protocol for the Regardless movie tokenization project.

Concept

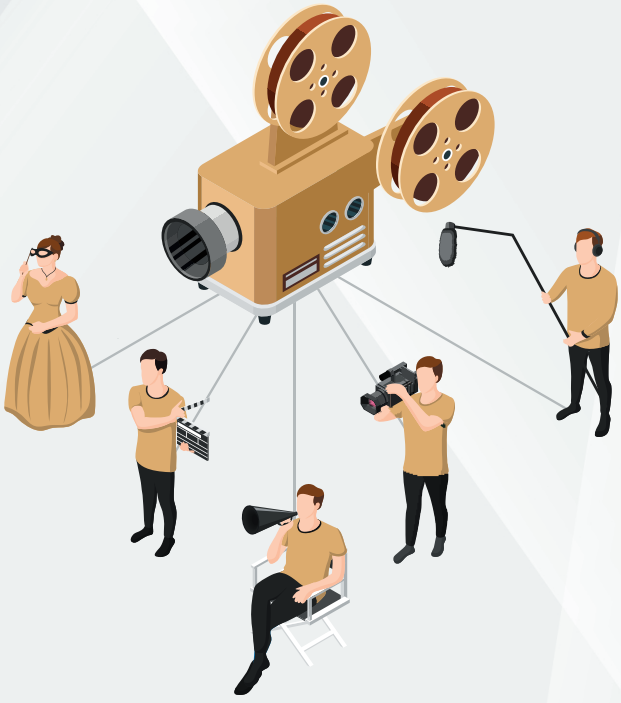
A Minter takes over the role of a movie studio and produces Movie NFTs, alongside Regardless Tokens. Every Movie Studio can work one Movie at a time. Since every Movie is an NFT, the movie can then be traded on the NFT marketplace at all times once done.

There should be ~3 interactions per day.
(‚interactions' – Randomly allowed minting transaction calls to the minter contract). With one complete movie needing around 15 interactions on total.

Regardless Token Payout

The token payout is split in two parts: Box office and Movie revenue.
The Box office is paid out instantly once the Movie is finished. A completed Movie generates ongoing revenue in tokens for a while.

Minting Process



The minting process of a movie has 2 phases. Every time the minter contracts interact function gets called different things happen, based on the phase the movie is in. If no movie is in production a new one gets started.
At first the movie starts out as a script, and you need to find crew members to start filming. This is phase 1. Once you found 5 crew members you can start to film and need to create 10 scenes/takes until you are able to finish the movie.

Phase 1 - Concept/Script/Crew Phase

In Phase 1 the Movie Studio has to hire crew members to produce the movie. Everytime interact is called another random Crew Member NFT gets minted and assigned to the Movie Studio(Minter). Then, if the Movie Studio has more than 5 crew members, the movie production moves to the next phase. The Minter can set an arbitrary name for the upcoming movie. Hiring different Crew members improve the outcome of the movie. Since Phase 1 needs 5 interactions, this needs up to two days.

Phase 2 - Filming

There are multiple takes needed to fully produce the movie. Everytime the minter calls interact, the crew tries to create a take/scene for the movie. Every take has the chance to make the movie fail. When this happens all takes are removed, and the movie has to be filmed again all over(Not every movie makes it). The crew stays as is. After enough takes, the movie proceeds to be premiered. Phase 2 should take up to 10 interactions.

Premiere

All the crew members get removed from the studio(burned), the minter gets rewarded with newly minted tokens(representing the box office) and a Movie Staking NFT (representing ongoing revenues like license fees, etc.). Since the Movie is a NFT it means it can be traded on the upcoming NFT Marketplace(Only the owner can claim the revenue rewards). The cumulating rewards of the Movie NFT can be claimed anytime by the NFTs owner. NFT Rewards generate constantly up until a fixed time (1 month after minting). The Studio Name, Movie Name, and the Cast gets written into the NFT without any possibility to change afterwards.

Payout

The payout is split 50/50 into box office/revenues. The Revenues can be claimed over a month after the movie premiered. Since it might take several tries until a movie can be premiered this will even out the token generation per day.

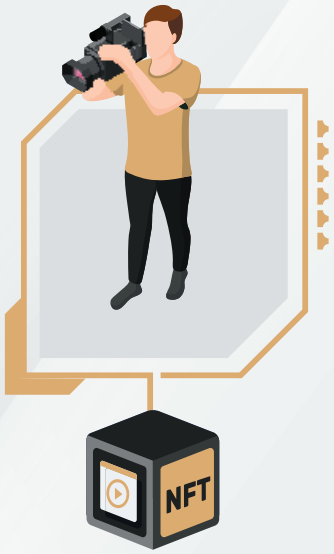
Contract Properties

Contract Properties

Minter contact

- name – You can name your Movie Studio
- crew members – Enumerable List of token ids of the Movie Crew NFT Contract
- takes – amount of takes needed to create a movie.

Movie NFT – Staking NFT (ERC721)



Additionally, to the Staking NFT

- name – can be set once by the owner
- minter – movie studio name
- cast – names of the movie crew if they are named

Regardless Movie Crew – ERC721

- name – You also can name your Pokémon. Why not your movie crew.
- type – there are 3 different types: Actors, Directors and Camera Mans.
- tier – every Crew Member comes in 3 different tiers(amateur, professional, super star), with different bonuses:
    - — Actors will increase the token yield of the movie.
        - Amateur: +0%
        - Professional: +6.66%
        - Super Star: +20%
    - — Directors will reduce the chance of a movie to fail.
        - Amateur: No Bonus
        - Professional: Sets Take success rate to 95.5%
        - Super Star: Sets Take success rate to 96.5% (See calculations)

— Camera Mans will reduce the required amount of takes without diminishing the reward.

Amateur: 0 takes

Professional: 1 takes

Super Star: 3 takes

The Actor Bonus is capped at 100%.

The Movie Crew is „hired“, which means that they are transferred into the minter contract. You can stack an infinite amount of Crew Members, yet once a movie is done all Crew Members get „consumed“/burned. You can „fire“/sell Crew Members by removing them from the minting contract.(Is allowed to the owner of the minter).

Payout calculations

Payout calculations

A Movie needing up to 15 interactions (with no crew and no failures) and 3 interactions per day, with ~100 REGA per day, means the base value of one interaction starts at ~33 REGA.

Failure Rate

Assuming a 5% failure rate per take, means:

- ~60% of movies work out 1st try (.95^10)
- ~84% will work out 2nd try (1 - .4^2)
- ~94% will work out 3rd try (1 - .4^3)
- ~97% will work out 4th try (1 - .4^4)

This increases the base value per interaction to 33 * 10/6 = 55 REGA(10 Movies started only payout 6 Movies). A whole Movie respectively yields up to 55 * 15 = 825 REGA without Crew member bonuses.

Furthermore, this means that the Staking part of the Movie should pay out over at least 3 cycles. Otherwise, minters are too likely to not produce any output over some days.

Crew members

Camera Man

Based on the interaction evaluation a Professional Camera Man equals to 55 REGA. A Super Star Camera Man equals 165 REGA. Since the Camera Man reduces

Actor

To balance things out a Super Star Actor must yield a 20% Bonus (165/825). The Professional Actor therefore 20/3 = 6.66% Bonus. Multiple Actors

Director

The Director should yield a similar bonus than the Camera Man and the Actor. Therefore:

- 55 * 1.2 = 33 * 10/(6-x)
- 66 = 33 * 10/(6-x)
- 1/5 = 1/(6-x)
- x = 1

This means that the Super Star Director can complete 1 out of 10 movies more than a normal one:

- (1-x)^10 = .7
- (1-x) = .7^.1
- (1-x) = .9649

So the Super Star Director should set the success rate to 96.5%. The Professional Producer

Occurrences

Every movie should have on average one Professional or better Crew member(1/5). Super Stars should be much rarer, occurring only in one out of 6 movies(1/30 Crew Members).

Therefore, there is the following distribution during Crew Member generation:

- 80% Amateur
- 16.666% Professionals
- 3.333% Super Stars

Roles are not distributed either. You usually only need one Camera Man/Director per movie. Therefore, roles are distributed as following:

- 20% Camera Mans
- 20% Directors

- 60% Actors

Since a Professional crew Member increases the yield by 5% and a Super Star by 20% you have an average minting boost by

- .8 + .1666 * 1.05 + .0333 * 1.2
- .8 + .175 + 0.04
- 1.015

This means the yield per interaction needs to reduced by 1.5% to cancel out the crew member bonuses.

Final Yields

So a film yields 54.175 REGA per take. This is split 50/50 in box office(instant pay-out) and timed revenues(staking). The personal minting factor and time halving is added on top of this calculation.

Some Ideas

- Make movie length random (shorter movie – less takes required). Would change evaluation of different crew members.
- Generate random names for movies/crew, etc. Needs external Service. Maye plot generation based on AI.

Possible exploits

You can hire a Super Star Producer and remove him right before the movie is about to be done, and reuse him in the next one. This would avoid him to be burned and extract more value than calculated out of this system. On the other hand this would cost on average the estimated value per interaction, since the movie needs to hire another crew member first before it can be finished. The best countermeasure would be to increase the value per interaction beyond the calculated gain by decreasing the needed interaction to finish the protocol.

Technical Parts

- The minter gets initialized with takes = 1, which means the next interact call with create a finished movie + movie staking nft. This is to ensure the minting product mints from day 1, and people stop complaining about „nothing is happening for days“, like at the Tupan project. This also removes the ramp up time.
- The Movie NFT is based on the AVINOC Staking NFT, so there is no additional development needed for that part. It can be renamed and deployed as is(removing the signature bonus part).
- The Crew is based on a NFT. ERC721 contract function can be used. Namely ownerOf, balanceOf, mint and burn, and the transfer functions.
- Interactions are done the same as in the SIDI Minting. This means the cloud minter script can be reused.
- Deployment and registration can be taken fom the Sidi Minting. So the batch registration script can be reused as well.
- Since the bonus is based on NFTs in the minters contract, test cases are very low effort and easy to engineer.