On-chain Copyrights Management

Feasibility study for an Ethereum Copyright Management Organisation (CMO)

ETHTurin Meetup Group

Preamble

- There is no global database of copyright deposits (there is for artists)
- Copyright Management is one of the hardest system to improve, mostly due to consolidated monopolies in each country
- Europe' <u>Digital Single Market strategy</u> has breached through these monopolies with the 2014 EU "Barnier" Directive (*Collective management of copyrights and the multi-territorial licensing of rights for the online use of musical works*) which opens *de iure* the copyright market to other non-institutional players, corporate and non profit
- Monolithic systems have only partially implemented the directive, allowing copyright holders to choose whatever management they want, but confirming their state-owned CMOs as the only one with the mandate to mechanically collect the copyrights. In addition, the italian government declared that new proposing CMOs can be only non profit
- There is a fundamental difference between royalties and copyrights. Many blockchain music startups are addressing the realm of royalties, but none have thought about constituting an on-chain organization for depositing and collecting copyrights on chain

Proposition

- We want to instantiate a fully decentralized CMO for the Ethereum Music growing ecosystem
- This on-chain CMO will not be represented by or governed by any DAO or transferrable token-based governance system, it will be a simple Registry on Ethereum L2
- The Members of this Organization will be all verified addresses that have contributed to the Registry successfully
- The CMO governance will operate via quadratic voting, with every member in possess of the same voting power
- The Storage of the CMO will work via a dedicated IPFS gateway (like Pinata.cloud), made of nodes run by individual CMOs (SIAE, GEMA, SUISA, ASCAP, PRS etc.).
- In order to minimize the occurrence of Disputes over Copyright, new deposits that harness part of the copyright (music and/or lyrics) of another composition will be able to tie-in into the previous copyright and be rewarded for their honesty
- Disputes that may occur with precedents deposit may be resolved either via CMO members voting or via legal instance to juridical DAOs like JUR.

FLOW

Alice, Bob and Charlie wrote a Song together. They want to deposit their copyrights on the Ethereum Blockchain.

Alice will access the Registry via a proxy contract or a Certification Authority that provides for her ID.

She opens a new Deposit and starts by creating a simple wallet, or multi-sig wallet with her co-authors Bob and Charlie.

In case of the multi-sig, the multisig will be created only upon acceptance (signature) by Bob and Charlie.

| Alice 0x1 |
| Bob 0x2 |
| Charlie 0x3 |

.zip

Score / Lyrics

MP3 Audio File

IPFS

CID
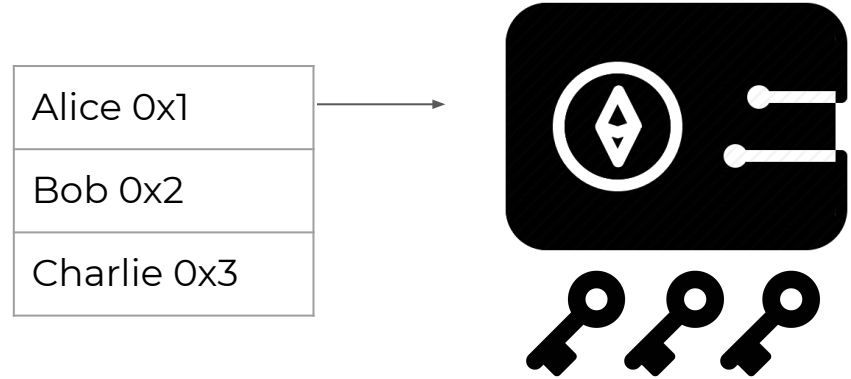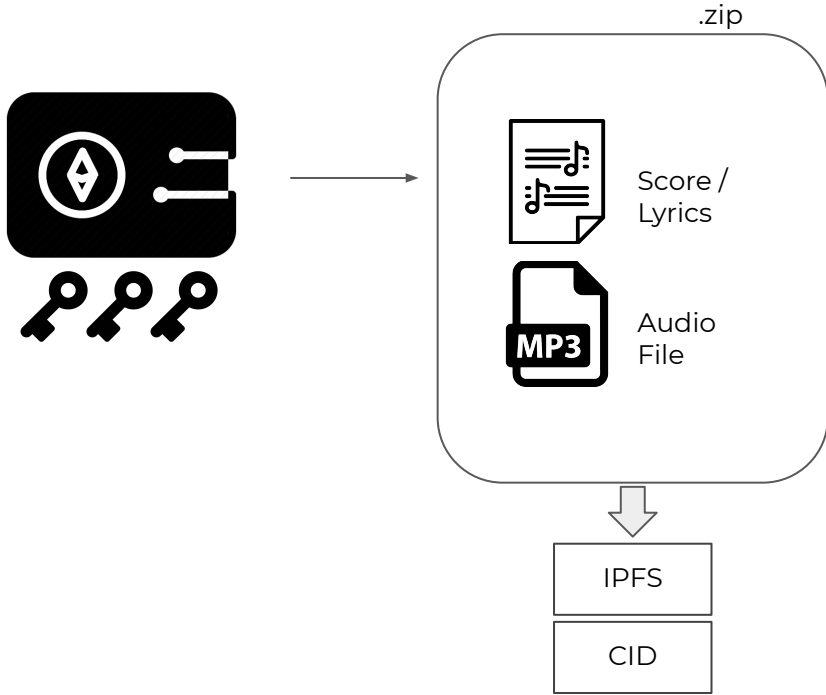
Once created, the wallet can start issuing copyright deposits.

Alice will create a Song Instance and upload the .zip necessary materials for the deposit: an audio file and pdf with a proof of the musical score and/or lyrics.

Upon multi-signature approval (message sign), the .zip material is hashed on the IPFS and a CID (and possible gateway url) is generated and returned.
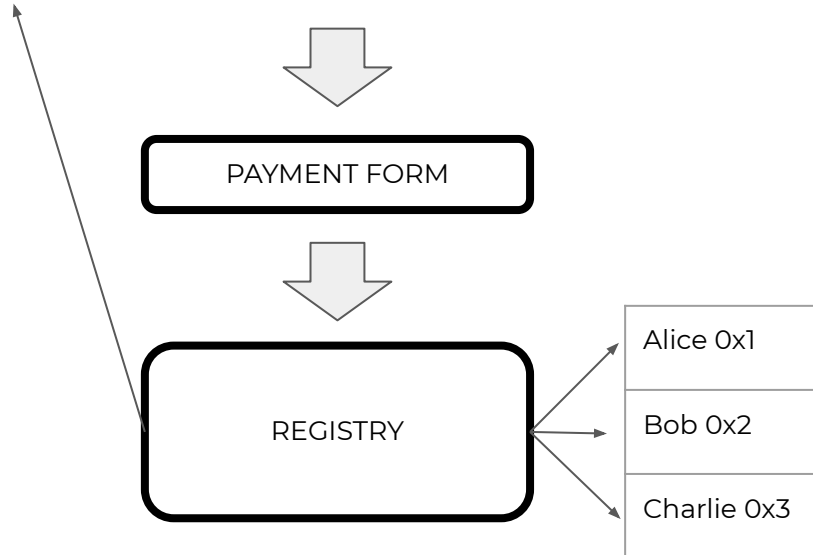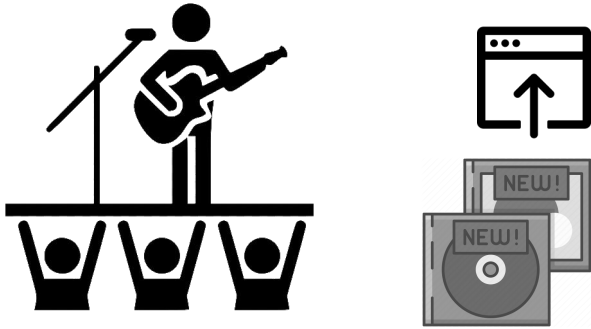
Once the .zip package has been hashed on IPFS, Alice will divide all the copyrights of music, lyrics and arrangements amongst Bob, Charlie and herself via a **Deposit Form**.

Upon submission and Form multi-sig confirmation, a submitCid() function will take each member's quota, the IPFS CID, and send them to the Registry Smart Contract.
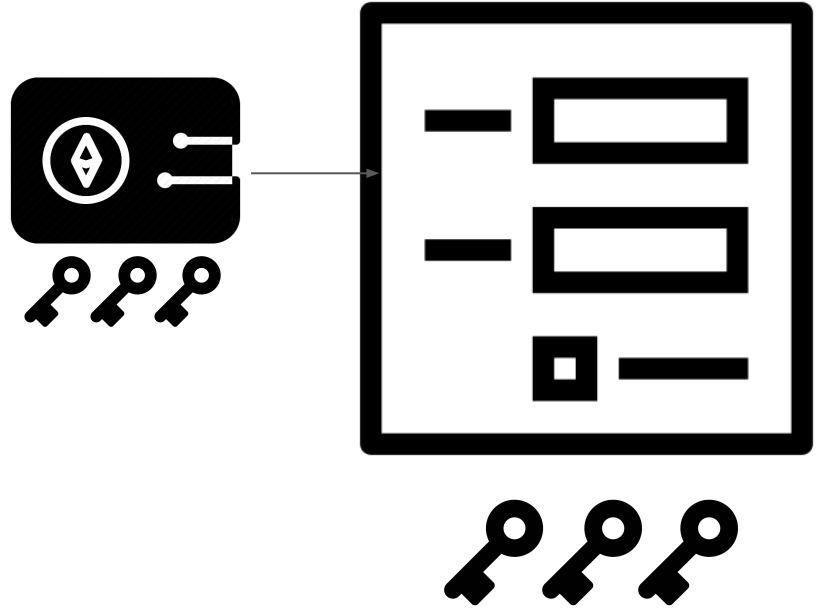
PAYMENT

When performing or publishing of the copyrighted material, the copyright-Using Party will access the Registry Contract via a **Payment Form** where the option for Live or Online Publishing will be selected and resulting fee generated.

In case of partial use of the copyright (say, use of only music or only lyrics), it will be possible for the Using Party to select such options and to include/exclude certain right holders.

As an **incentive** to declare the use of copyrighted material, the Using Party is rewarded with **ERC1238** 'badge' tokens (or POAP) that will grant him/her voting power in the CMO, as well as participation in periodical lotteries.
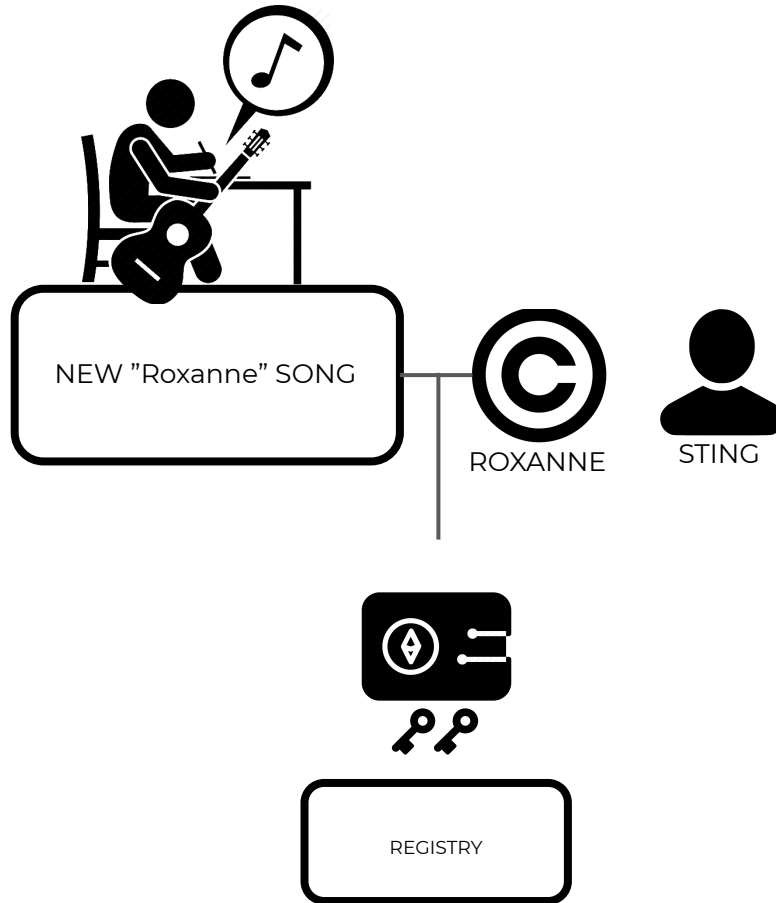
STORAGE

The Ethereum CMO will harness storage capacity from white-listed IPFS peers, or an own gateway of IPFS nodes provided by national CMOs.

In this scenario, in order to guarantee the permanent storage of each deposit, IPFS nodes provided by national CMOs will be rewarded by deposit fees.

COPYRIGHT
TIE-IN

NEW "Roxanne" SONG

ROXANNE

STING

REGISTRY
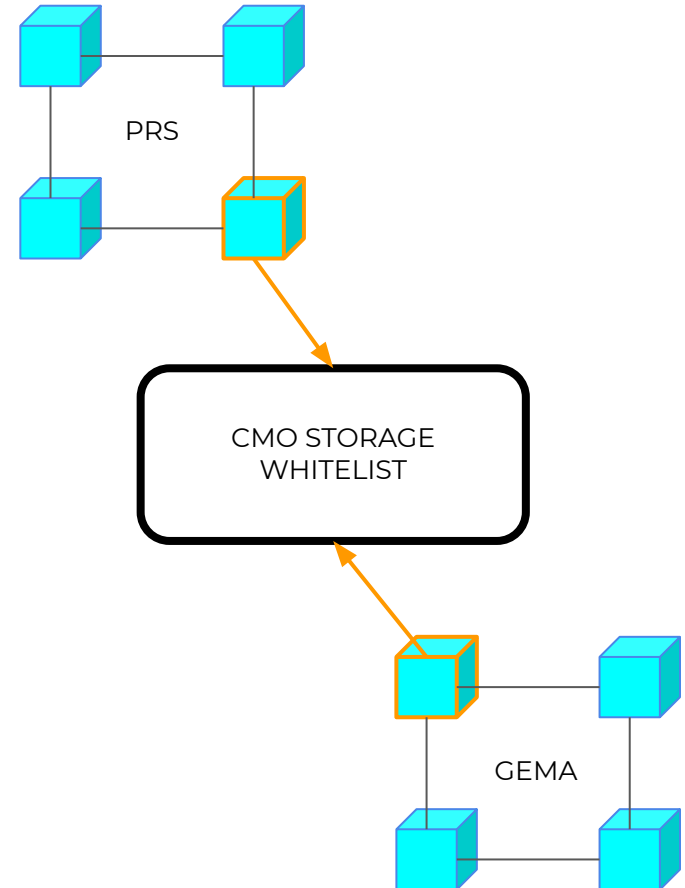
When depositing a new composition that uses part of e.g. Sting's "*Roxanne*", Bob can tie-in his new deposit to Sting's composition, specifying the extent of the copyright usage.

Sting will then accept or refuse the connection.

Upon acceptance, a new multi-sig wallet between Bob and Sting will be created for the opening of the new deposit instance on the Registry.

By tying-in his copyright to "*Roxanne*", Bob's Song will be inserted into Sting's Copyright Tree.

Being listed into Sting's Copyright Tree will earn Bob exposure to Sting's fanbase as well as to Merchants interested in using the "*Roxanne*" mood for commercial purposes.

Inevitably, the Copyright Tree will also provide a real-time, on-chain way to catalog music history.

STING

SO LONELY   ROXANNE   FRAGILE

BOB's Song

NEW "Roxanne" SONG

REGISTRY
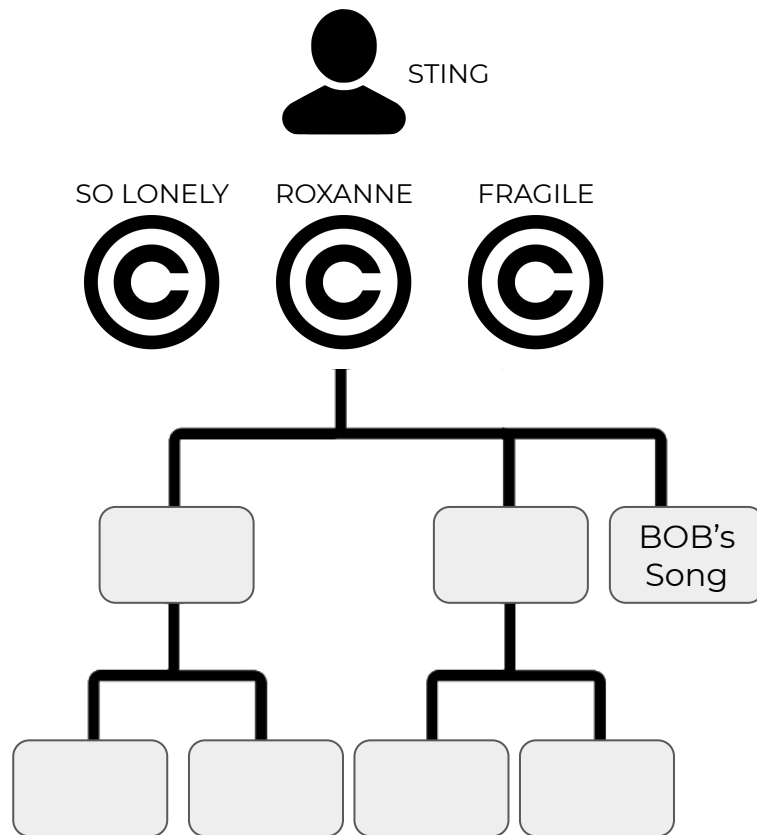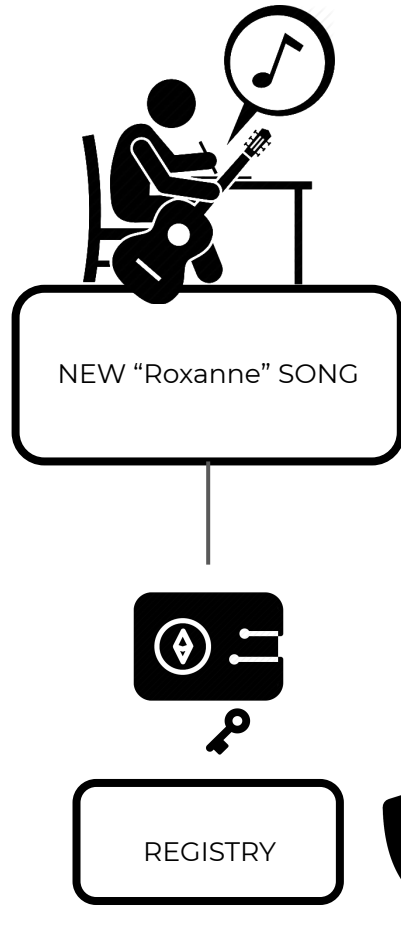
STING

Should Bob not decide to tie-in his *Roxanne*-inspired Song to Sting's copyright, Sting will be able raise a Dispute within the CMO by staking a given amount of ETH.

A community vote amongst the badge-token holders will take place and determine the flagging (or not) of Bob's Song.

FLAGGED: Sting gets his stake back, Bob's Song is black-listed and unable to receive payments.

NOT FLAGGED: Sting loses his stake, his supporters penalized in future votings and Bob's Song deposit remains untouched.

Both Sting and Bob can also decide to skip the community vote and go via traditional proceedings.

To this extent, the appearance of on-chain arbitration chambers and ODRs like the ones powered by JUR represent a valuable player that can be empowered within the CMO with a relative majority stake.

Notes

- We must take into that "cryptographically valid" does not always add up to "legally valid". For this purpose we need a European legal framework to act upon (e.g. European Court of Justice)
- Starting from a NON PROFIT is fundamental in order to harmonize within the existing relationships between CMOs.
- CMOs might be interested in a system like https://www.cxip.io/
- Proof of ID should be achieved via a certified validator like InfoCert
- We might need a new compressed audio format
- Marketplace: what if I want to sell away my copyrights (forever/short-time)?
  - Proxy contracts