## CRPL: Architecture

# Harrison Beau Barker

January 15, 2022

#### 1 .NET service architecture

Auth service user authentication.

1. Auth

Wallet service user ethereum wallet/account management.

1. CRUD

Issuing service registering new copyrights to the blockchain.

1. Register

Verification service verifying the authenticity and originality of a work.

- 1. VerifyWork
- 2. Hash
- 3. SignWork (maybe in the issuing)

General query service querying the whole system mainly used for UI, copyright index and search.

- 1. Get all
- 2. Search
- 3. Get my work
- 4. Get work

Rights management service modification, transfer of ownership.

- 1. Transfer ownership
- 2. UnRegister
- 3. ConvertRights

Dispute service filing and resolving copyright disputes.

- 1. FileDispute
- 2. Resolve
- 3. Cancel

Contract management deployment and monitoring of systems contracts

Ping service work "use" tracking

- 1. Ping
- 2. GetPings

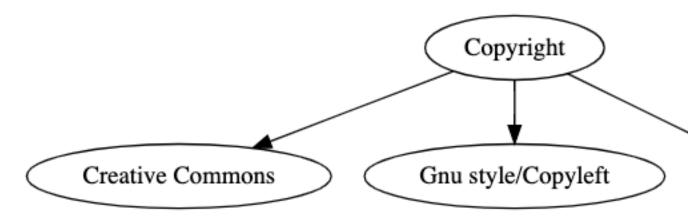
Payment distribution service

### 2 API

- /user
  - 1. /auth
  - 2. /wallet
- $\bullet$  /rights
  - $1.\ /\mathrm{register}$
  - 2. /unregister
  - 3. /modify
  - 4. /transfer
- /q
  - 1. /get/#id

- 2. /get/all
- 3. /get/me
- 4. /search
- /dispute
  - 1. /file
  - 2. /resolve
  - 3. /cancel
- /p

## 3 Copyright smart contract



- 4 Database
- 5 Angular