songfeeds

decentralized music distribution with easy donations

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part i

overview of copyright
copyright law

the right of an author to publish their work, exclusive of all other persons.

- includes control over derivative works, and the right to attribution
- authors usually sell their rights to a publisher
- copyright terms over the years:
  - 1790: 14 years (+ possible 14 year extension)
  - 1976: life + 50 years
  - 1998: life + 70 years (incl. existing works)
arguments for strong copyright

- provides a business model for record companies
- "you wouldn’t download a car"

we’ll focus on the music business
arguments for weaker copyright

• freedom of speech

• artists make most of their money through concert ticket sales

• tradeoffs have changed: in the digital age, the right to copy and share is worth something to ordinary people

• excesses!

copyright originally applied to books, and originated in the age of the printing press, at a time when the cost of making a single copy was high, but the cost of making many copies was very low per copy. in this situation, copyright allowed publishers to receive a return on their initial investment in an artist, similar to how patents work today.

when copyright came about, the public gave up their freedom to distribute copies of books in exchange for the creation of more books until recently, this tradeoff was worthwhile because it was impractical for the public to copy books anyways. now, making single copies is easier, i.e. a right that the public can easily exercise. so many people feel that the tradeoff is no longer worth it
music copyright in action

• in 2006, the *On-line Guitar Archive*, a collection of user-contributed guitar tabs, was served at takedown notice by the National Music Publishers’ Association

• in 2013 (after 6 years of trials), Jammie Thomas-Rasset was fined $220,000 for downloading and distributing 24 songs

OLGA case shows that copyright holders can prevent the distribution of tabs/transcriptions, because they are derivative works.

used service called Kazaa (ka-ZAH)
was offered a settlement of $5,000; declined
part ii

my project
primary goal

new economic model for music

• allow sharing

• support artists through donations

• donations partly automated on the client side
secondary goals

- open protocol
- free software implementation
- allow artists to host their own music, or select their own independent host (similar to email)
- minimize overhead of running a server

The general idea is to protect against user-hostile features, and ensure that as much $ as possible goes to the artists, rather than the operators of the service.

Services like Spotify and Patreon can always change their service, or increasing the number of ads or decreasing the amount they pay creators. These goals make it so that the server operator is just a server operator, and gets paid for that, but doesn’t have control over his users.
songfeeds

- extension to RSS
- feeds include a bitcoin address for donations
- music is licensed under a Creative Commons license
- client integrates with music player and bitcoin wallet to suggest donations on a monthly basis
<?xml version="1.0" encoding="UTF-8"?>
<rss version="2.0" xmlns:atom="http://www.w3.org/2005/Atom">
  <channel>
    <atom:link href="http://songfeeds.malchik.net/rss/feed.rss" rel="self" type="application/rss+xml" />
    <title>stoneface priest</title>
    <link>http://songfeeds.malchik.net/rss/feed.rss</link>
    <songfeed:donate type="btc:artist" addr="12edfiz5f4kZrc3T6y8Z3wQvJGx5zH3LZ" />
    <songfeed:donate type="btc:server" addr="1MPakbTUjKwgKHgpS4S8Za4yjczQ4Z3n3" />
    <copyright>CC-BY</copyright>
    <item>
      <title>take control</title>
      <pubDate>Tue, 28 Mar 2017 00:00:00 +0000</pubDate>
      <guid isPermaLink="false">songfeeds.malchik.net/music/stonefacepriest_-_take_control_-_stoneface_priest</guid>
      <songfeed:artist>stoneface priest</songfeed:artist>
      <enclosure type="audio/mpeg" url="http://songfeeds.malchik.net/music/stonefacepriest_-_take_control_-_stoneface_priest.mp3" length="4469760" />
    </item>
  </channel>
</rss>
architecture

user

songfeed

artist
donations
architecture

client

---- songfeed ----

server

---- donations ----

artist

songfeed

donations

songs
architecture

user -> user's wallet

user's wallet -> artist's wallet

artist's wallet -> artist

artist -> server

server -> music player

music player -> songfeed

songfeed -> client

client

user

artist

user's wallet

artist's wallet

server

music player

songfeed

client

$ from user to user's wallet

$ from artist to artist's wallet

$ from user's wallet to artist's wallet
client implementation

• will run on Linux

• implement plugin for MPD or Quod Libet
  • fetch songfeeds and add music to library
  • keep track of donation addresses and listening data
  • suggest donations to the user (bi)monthly

• use Blockchain.info API

• allow configuration of donation suggestion algorithm
future work

• use BitTorrent for downloads

• factor recent income into donation algorithm

  • weigh donations in favor of artists with lower recent income

• requires a unique mapping between artists and donation addresses

• clients for other platforms

• user-friendly web interface for artists
bibliography

• http://www.tomwbell.com/writings/(C)_Term.html
• https://www.wired.com/2013/03/scotus-jammie-thomas-rasset/
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THE END