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Problem & Philosophy

Problem:

- It's rare for NFTs to completely express their owner's identity
  - People (crypto-native and newbies alike) try to find, purchase, and use NFT punks that look like them to put in their Twitter, Discord, Telegram PFPs

Ex 1: Santiago Santos, former Partner at ParaFi Capital, who explicitly talks in podcasts about how he chose to purchase his Punk #9159 because it matched his IRL physical identity

Ex 2: Gaby Goldberg, Investor at TCG Crypto, who recently updated her PFP to be reminiscent of her as well:

Santiago Santos

Gaby Goldberg

Problem & Philosophy (Continued)

- While there is a portion of NFT/Metaverse people who want to maintain pseudonymity and anonymity (in the way their NFT PFP looks), there's, arguably, a greater amount of people who want NFTs that reflect their IRL identities and interests (Facial features, hair, background, etc.)
  - If NFTs want to truly go mainstream they must cater to both parties
  - Crypto culture (anonymity and pseudonymity) will likely not permeate and change mainstream culture which generally cares about conflating people with their actions.
    - Crypto culture, spawned from Satoshi being pseudonymous, cares more about a person's contributions and thoughts than does mainstream culture, which cares more about status and image.

Introducing:

Vision

ReMint will add an unprecedented amount of **customizability, utility, and functionality** to NFTs, while **adding value** to community members, original artists, and the NFT marketplace.

What is ReMint?

ReMint is a protocol based on EVM that enables users to lock their NFTs to mint a collection of new ones composed of the traits of the one that had been locked.

Users of the protocol can exchange these traits with others in a marketplace and *ReMint* and create a new NFT composed of the traits and attributes that they have collected.

Users can burn their newly created NFT traits to unlock their original NFT.

How does it work?

Smart contracts that allow for the following:

- Users can lock their NFT, and upon lock, a collection of ‘traits’ are sent to the owner.
- These trait NFTs will be determined by reading the metadata of the original NFT, and will visibly represent their trait. (A CryptoPunk with a purple background, female face, and accessories will get back a purple background NFT, female face NFT, and each accessory as NFTs)
- On the ReMint marketplace, each NFT collection will have their dedicated page (there will be no mixing of traits from separate collections). Users will be able to list, trade, and bid on traits. Users with no previous ownership to the collection will also be able to participate in this market.
- Upon collecting all the required types of traits (background, face, accessories eg.), users can ‘remint’ this customized new NFT. These will be part of a collection called ‘[original NFT collection name] ReMint’
- At any time, users can break down the reminted NFT’s back into the traits. The remint would be burned.
- At any time, users can redeem a locked original NFT with the correct traits. The traits would be burned.

Economics

ReMint will fractionalize NFTs in a way that adds value to the original collection.

1. Because **traits can redeem underlying NFTs**, in an efficient/game theory optimal market, owners of original NFTs will only sell their **traits at a premium** vs. the original (traits will never be valued less their representative fraction of underlying NFTs)

2. **Original royalties will be respected and enforced.** Volume of collections will dramatically increase, as there is a serious demand for customization and financialization of certain traits. We will also be charging 1% marketplace fee, **significantly lower** than OpenSea (2.5%), Magic Eden (2%), and RandomEarth (2%). This will further incentivize volume and trading activity on ReMint. Increased volume will benefit original collection artists and teams.

3. Communities of NFT collections will form stronger bonds and see more engagement. With ReMint, members of communities can now interact and trade on-chain. There are many creative, artistic, and investment possibilities with ReMint

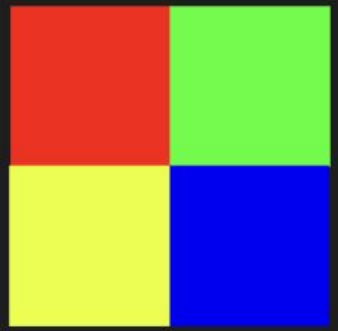
Design

Connect Wallet

ReMint

ReMint Refract

Original NFT



ReMint SmartContract (RSC) Minting

Refracted Traits

- Trait: Topleft, RED
- Trait: Topright, GRN
- Trait: Botright, BLU
- Trait: Botleft, YLW

ReMint

ReMint Swap

Refracted Traits

Trait: Topleft, RED

Trait: Topright, GRN

Trait: Botright, BLU

Trait: Botleft, YLW

DEX / P2P

Refracted Traits (Unique NFTs)

Trait: Topleft, RED

Trait: Topright, GRN

Trait: Botright, BLU

Trait: Botleft, GRN

ReMint

ReMint Condense

Refracted Traits

Trait: Topleft, RED

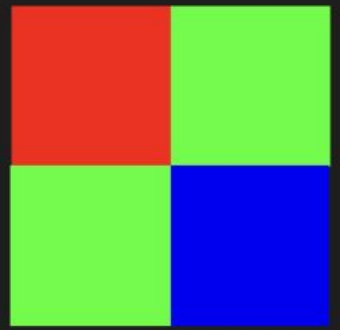
Trait: Topright, GRN

Trait: Botright, BLU

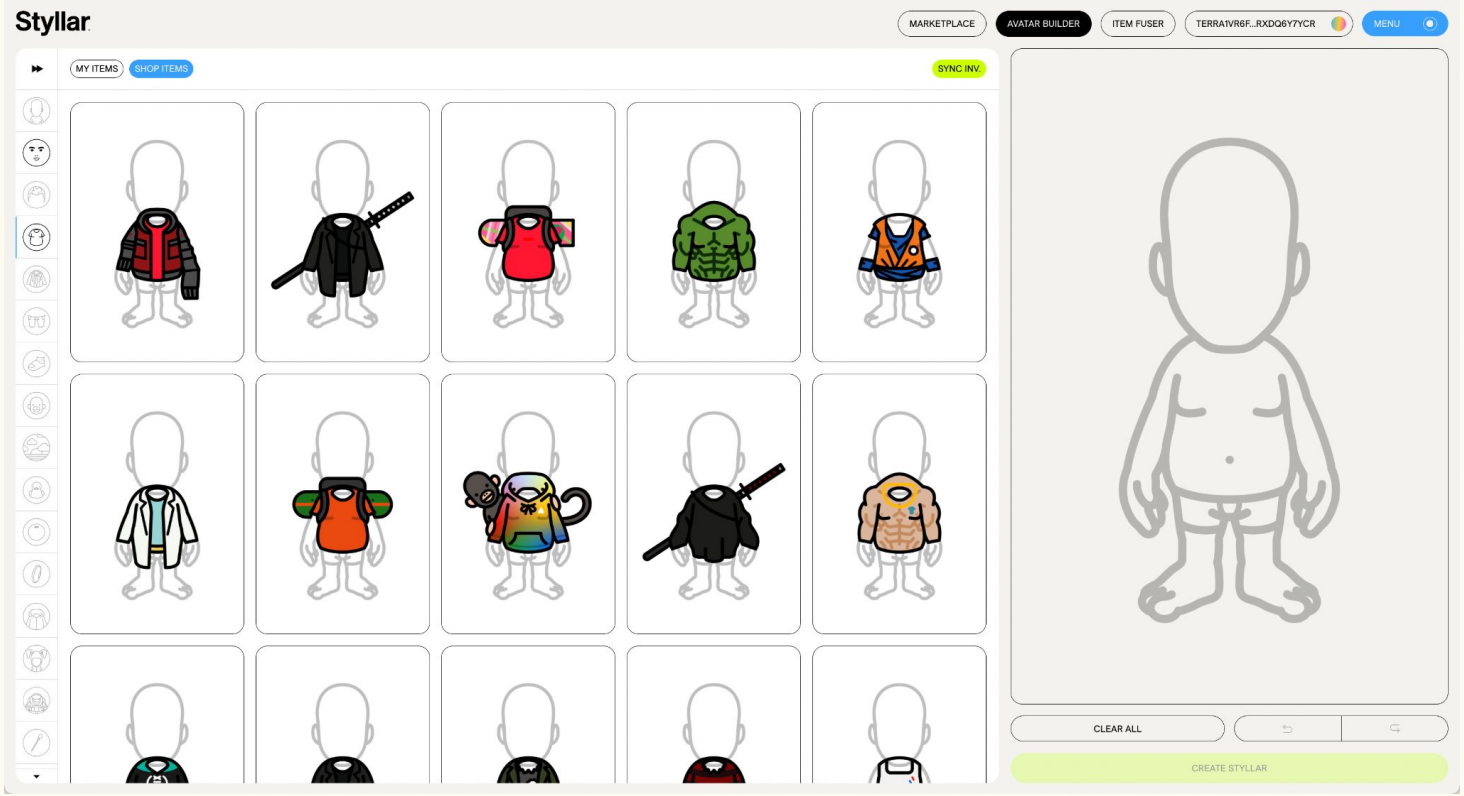
Trait: Botleft, GRN

ReMint SmartContract (RSC) Condensing

ReMinted NFT



P2P / DEX ReMint Market Example:



Challenges and Risks

1. Adoption/Marketing of Recombination markets and ReMinted NFTs
    a. Encouraging current holders of NFTs to trust our ReMinting, Refracting, and Condensation processes will prove difficult: by establishing presence in the NFT community and demonstrating “skin in the game,” we should be able to overcome this
2. Our current smart contracts still have a high efficiency ceiling
    a. Metadata is currently stored in predefined mappings, which on larger collections could cause data cost problems regarding high trait numbers
    b. Alternatively, a new metadata standard could be developed to include component info, such as the image and origin
3. Contract security
    a. The security of our contracts is imperative for users to trust our markets. Ensuring proper auditing and security measures are in place is absolutely imperative, but also costly

Our Story

Our Inspiration:

As rudimentary (but curious) NFT enthusiasts, we are incredibly passionate about NFTs and their ability to bring communities closer. We noticed that it was becoming increasingly difficult for individuals to find a way to represent themselves through NFT art (crypto punks specifically) without spending exorbitant amounts of money and sleuthing for months on end to find an NFT that they felt best represented them.

With this in mind, we created ReMint and committed ourselves to create a product that could simplify process for people to find, create, and mint NFTs that they feel best represent them. We focused on creating a protocol that adds as much value to the existing NFT space as possible– enabling new types of NFT markets, fostering more engagement in NFT communities, yet respecting scarcity and prioritizing existing incentives for NFT artists and teams.

Challenges:

We initially faced challenges in understanding the technical underpinnings of our project (IE: coding in Solidity versus Rust, choosing a track, and understanding how contracts, token, and blockchain core functionality all play together) and in designing the economic model to ensure that this protocol would be economically advantageous and worthwhile for users to utilize.

Nonetheless, after significant time spent hacking, **we resolved many technical issues (resulting in a working proof-of-concept and an extremely positive technical outlook) and have designed a genuinely exciting protocol which we can't wait to flesh out further.**

Team

MEMBERS:

Peter Bowman-Davis: Physics & Philosophy @ Yale ‘25; Prior CS experience

Jordan Bowman-Davis: Electrical Engineering @ Princeton ‘23; Prior CS experience

Felix Law: Economics @ Yale ‘24; No prior CS experience

Zaid Fattah: Economics & Data Science @ Yale ‘25; No prior CS experience

Past Projects:

- *Current*: SolarSystem—resource/content aggregation board for the Terra Ecosystem.
- *Current*: Incentive Design & Tokenomics for stealth crypto x local politics startup

COLLECTIVE:

- This is the first hackathon that we have each attended
- **No** members of our team had Solidity or Rust experience prior to attending LionHack
- **No** members of our team had prior experience working on NFT-related projects