

BackedBy: A Bankless, Decentralized Payment Protocol for Creator Monetized Content

BackedBy Foundation

info@backed.by

<https://backed.by>

1. Introduction

The Web2 model brought us monetized User Generated Content, but at great cost: control. Large platforms wield arbitrary enforcement of content moderation policies, lock creators into exploitative fees as their audience grows (15-30%), and routinely violate their users' privacy.

Users are left with no effective recourse, legal or logistical, to regain access to their accounts, which are their de facto link to their audience and the foundation of their business. This has cost creators millions of dollars and is often the result of political bias, nebulously defined and ever-changing Terms of Service agreements, inconsistent human judgment, and underlying algorithmic changes.

The fees these platforms charge are similarly nefarious. Ever increasing, and untied to server cost (which is always dropping), the most popular platforms punish their creators with exorbitant fees; sometimes topping 30% for the privilege of publishing to an audience that the creator themselves have built.

Finally, despite yielding total control of their content, audience, and even donating a withering amount of their hard earned money in support, creators and users both have no expectation of privacy from these platforms. They have been shown time and time again to violate privacy in the form of censorship, tortuously interfere with business contracts a la subscriptions, and presume guilt in the face of overwhelming evidence. This must not continue into Web3.

We present BackedBy, a bankless, decentralized payment protocol for creator-generated content monetization. BackedBy allows the peer-to-peer exchange of content and payments, unmitigated by corporate and political interests as made possible by the blockchain. The advantage of applying Web3 technology to the creator-consumer relationship is threefold:

1. Economic freedom. No middleman is required to ensure the security of payments as that logic is handled by the blockchain. This reduces the fees creators pay to payment processors and platforms by as much as 99% and encourages a more efficient transfer of money from patron to creator. Eliminating the influence of payment processors and corporate shareholders is the fundamental building block of the creator/supporter relationship and is a key component to the economic freedom that BackedBy offers.
2. Accountability culture not cancel culture. User generated content is hosted encrypted and decentralized with references to said content held on the blockchain. Data, profiles, user identities, and connections are no longer subject to restriction or even access by a centralized authority; not even by the creators of BackedBy. Your data, your relationships, and your content are yours and yours alone. With that comes accountability. While the content is encrypted and secure via the blockchain, public references are tied directly to users' wallets and exist on the blockchain forever. This is ideal.
3. Composability and innovation. BackedBy exists as a payment and subscription protocol and is independent of whatever frontend users may be accessing their audience from. Developers and creators are free to spin up their own frontends, pull their content from the blockchain in any way they see fit, and offer similar platforms to other creators. Developers are encouraged to innovate around the framework of our content monetization models in a way that current platforms are not. BackedBy doesn't want to control your audience. We want creators and developers to grow without restriction.

2. Rationale

Web3 adoption is increasing¹, with 13-21% of adults in the United States having purchased cryptocurrency from 2021-2022^{2,3}. Usage of dApps, spurred by the growth of DeFi, has increased participants' familiarity with Web3 and added functionality to the ecosystem like gaming and collectibles.

There is still work to be done to make the ecosystem even more open to attract newcomers. The association of "crypto" and "finance" limits the imaginations of users, who may be curious about the technology but don't see a case where it would be useful to them. If the market were to capitalize on the familiarity the smartphone-using population has with Web2 apps in a Web3 environment, the space is poised to explode.

BackedBy fills this need for a Web3 app with a Web2-inspired frontend and also solves a problem creators of all subscriber-supported platforms encounter, which is high platform fees and lack of control of their content. If the mass adoption of Web3 is to be realized then protocols must adopt two principles: usability, and an on-chain economy. BackedBy was developed specifically to address both of these.

Usability: Each iteration of computer user interfaces (command lines, GUIs, touchscreens) increased the total addressable market of the technology with lower learning curves to adoption. Similarly, the philosophy of the BackedBy platform is to decrease the learning curve of interacting with dApps using wallets.

BackedBy's site design and user experience are developed to minimize the friction that comes with interacting with other Web3 apps, the goal being if someone is a Web3 noob who's never used a dApp before, they should be able to create a profile or subscribe to a creator in under 5 minutes. We accomplish this using a comprehensive video tutorial series, FAQ, and plan similar initiatives to encourage greater usage. Fast transaction times and low cost storage are available to meet the user's expectations of a Web2 experience, but with Web3 enabling instant payment settlement.

On-chain economy: Previous trends in crypto have comprised: greater bitcoin usage in 2013, altcoins in 2017, and defi/NFTs in 2021. If the commonality among each theme is the increase in variety and functionality of Web3 tokens and protocols, what trend will 2024 follow assuming this pattern holds? We argue that an increase in on-chain commerce driven by a proportional increase in adoption will be the catalyst, and BackedBy is uniquely positioned to lead that trend. There will be greater liquidity moved on-chain and remain on-chain for longer, addressing the speculative mania that has caused collapses in previous crypto market cycles.

The motivation to keep liquidity on-chain will be the transition from wallets as identities to wallets as entities. What does this mean? The practice of having payment processing handled by the blockchain instead of banks will benefit subscriber-to-creator payments thanks to lower fees, and also B2C payments where all of a business' payments are processed on-chain. The rails built by the BackedBy development team for payments provides a foundation which facilitates efficient and secure development, and supports multiple types of payment structures including recurring payments, crowdfunding, donations, and single payments in exchange for goods and services.

Treating wallets as entities also makes the management of a business' internal finances easier as payments to employees can be handled programmatically with smart contracts. Because payments are settled much faster than bank direct deposits this increases the options businesses have to pay their employees without restricting them to periodic pay periods. Additionally, the accuracy of on-chain historical data makes business accounting much more efficient and transparent. Once this is developed, businesses of all sizes can take advantage of the instant settlements and security that Web3 offers.

¹<https://etherscan.io/chart/address>

²<https://www.cnbc.com/2022/03/31/cryptocurrency-news-21percent-of-adults-have-traded-or-used-crypto-nbc-poll-shows.html>

³<https://www.pewresearch.org/fact-tank/2021/11/11/16-of-americans-say-they-have-ever-invested-in-traded-or-used-cryptocurrency/>

We plan to offer incentives to early adopter creators in the form of governance tokens, used to dictate the future of the platform. Web2 platforms profit off the content generated by their users, but those users have no voice in the direction of those platforms. We value the opinions of power users who can promote ideas they would have no ability to advocate for in a Web2 platform-user relationship. We expect to found a DAO where holders of BackedBy governance tokens can participate in directing the treasury, providing a measure of ownership over the direction of development. Meanwhile the core contracts of the protocol will be non-upgradeable to preserve the integrity of the system. Of the tokens to be minted, 10% will be distributed to the first wave of creators onboarded to BackedBy. These creators will be entitled to a greater share of this fraction of tokens dependent on the number of subscribers they bring with them.

BackedBy hopes to enable this future by granting one-click deployment of smart contracts for a business to securely set up its financial infrastructure. Specifically for content creators, this can automate common business tasks like paying collaborators and granting permissions to staff to create, edit, and post content.

3. How it works

BackedBy mimics traditional Web2 design in order to be familiar to inexperienced users, but supports Web3 capabilities of data storage, on-chain payments, and wallet integration. The user experience for account creation and BackedBy's unique features for Web3 crowdfunding are detailed below.

a. Account creation

The first step to gently onboard creators and subscribers to the site is to assume BackedBy is the first dApp they have used after leaving a centralized exchange's walled garden. The best way to learn anything is to learn by doing. BackedBy provides a welcoming platform for first-time dApp users which, importantly, is fun and has very low stakes. There are no complex financial systems or the threat of losing funds. A new user can experiment with the account creation sandbox and make dozens of mistakes at a total cost of under \$1 because of Polygon's low gas fees.

However to reduce mistakes each step of account creation is paired with a tutorial video intended to teach the user intuition on how BackedBy works (and more generally, how data and transactions are handled on the blockchain), and account setup will naturally follow that.

i. Creator accounts

During account creation the user is prompted to sign the transaction using their wallet, associating the creator profile with that wallet. This ownership can be transferred to a new wallet, or for more advanced users, ownership can be held using a multi-sig wallet where change in ownership must be signed off by all parties in the multi-sig contract. The user is also prompted to create optional subscriber tiers if they wish to paywall some of their content. The creation of each tier is written to the blockchain as a transaction that links permissions for recurring payments from subscribers, decentralized stored content, and encrypted access control, details that will be covered in the following sections.

After a wallet is connected to the account and tiers with payment levels are set up, the user can start posting text, audio, and video to their feed and accept subscribers. The creator has access to each subscriber's wallet address and, if the subscriber consents, the subscriber's email.

ii. Subscriber accounts

Subscribers may only access paywalled creator pages with a connected wallet (but they can browse profiles and see free content without connecting) so we offer multiple tutorials to help any new users install a browser wallet extension if they haven't before. When subscribing to one of a creator's paid tiers a subscriber may enable automatic payments so they don't have to manually pay for each month's subscription to a creator. A subscriber's profile shows all accounts they have subscribed to and can be notified via email when a new post goes live.

b. Features:

i. Recurring on-chain payments

A subscriber may grant BackedBy the ability to debit their wallet monthly for exactly the cost of the payment tier without the creator being able to take more without permission. The subscriber retains the option to cancel their recurring payments if they wish. Recurring payments to a creator are enabled for 5 years and must be renewed after. The rationale behind designing the payment system this way is to reduce gas costs for transactions, although gas is extremely cheap as BackedBy operates on the Polygon blockchain.

To mitigate fluctuations in creator income due to token prices changing BackedBy only accepts payments in high-cap stablecoins: USDC, DAI, and USDT. They are common, available on most centralized exchanges, and lower risk relative to other stablecoins that have depegged before.

ii. Decentralized content storage

Where is creators' content stored? We have developed a decentralized method of storage that allows for 24/7 access by creators and subscribers that saves data to IPFS. New posts, regardless of filetype, are stored here and written to the blockchain. The creator retains sole control of this data and it is only they who can edit or delete it. While BackedBy is not responsible for the content of this data it still cooperates with law enforcement to identify any creators who break the law, a straightforward proposition as blockchains record all activity written to them including which profiles posted which content, and when.

iii. Access control for paywalled content

How is a creator's intellectual property protected if it's stored on IPFS and thus accessible by anyone who can read the blockchain? Paywalled posts are encrypted using Lit Protocol decentralized access control⁴. For a given creator's paywalled post, the logic behind determining if a given user can access it is as follows:

1. Creator uploads a post to their feed, marks it as a paying-subscribers-only tier, and the content of this post is scheduled to be written to IPFS during the next block.
2. Lit Protocol encrypts the content of the post before writing to IPFS and records this to the blockchain.
- 3a. Paying subscriber goes to the creator's feed to access the latest post. They sign in with their wallet and Lit Protocol checks whether that wallet has an active subscription to the creator. Having found an active subscription, the front-end requests the IPFS address containing the post and decrypts the data.
- 3b. Non-paying subscriber goes to the creator's feed to access the latest post. They sign in with their wallet and Lit Protocol checks whether that wallet has an active subscription to the creator. Not finding an active subscription, the content of the post remains encrypted and the front-end displays a locked result to the subscriber.

4. Conclusion

We've outlined a protocol that is the first of its kind: a decentralized payment processor that enables content creators to distribute their IP to paying subscribers, with recurring payments and encryption to prevent unauthorized access, and gives the creator full and complete ownership of their IP and subscriber list through emails and wallet addresses.

⁴<https://developer.litprotocol.com/accesscontrolconditions/intro/>

There is so much more planned that may be built off of the BackedBy framework: tip-supported live streaming video, paid messaging directly between creator and subscriber, alternate payment paradigms like goal-oriented crowdfunding, donations, and an online storefront. We believe the next stage of Web3 lies in bringing businesses, not just individuals, on-chain; and BackedBy represents the first step toward realizing that future.
