Publica

TELL YOUR STORY

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Publica - The 1st Protocol
For Decentralised Publishing

Publica's protocol for decentralised publishing on the blockchain is a reinvention of Gutenberg's press for the 21st century. Even if it becomes a de-facto largest publisher, it maintains no inventory. Nonetheless, the books that it publishes can last forever, both for the readers who own them and for the world.

A book's access keys are represented by an Ethereum ERC20 token that Publica calls the READ Token, unique to each literary work. A READ Token balance is mapped to the public key of its owner in Ethereum's programming language called Solidity. Decentralised free access to the Ethereum blockchain's data enables transparent verification of ownership. It also enables decentralised authorization of access to the literary work that any given READ Token is associated with.

The operational protocol layer is built in Solidity and uses the Ethereum network's computing power. It processes direct transactions in the protocol's currency between readers and authors (buyers and sellers) for a book's access keys.

Literary works will be stored in decentralised immutable storage built on top of continuously advancing solutions for decentralised immutable storage. Publica protocol is experimenting with solutions offered by IPFS, Storj, Sia, MaidSafe and upcoming Filecoin, EOS and eventually, Swarm for Ethereum.

Publica's protocol is powered by its currency called Pebbles (PBL ticker, an ERC20 token), issued in a fixed and locked supply.

The protocol's application layer of customer-facing apps will be built by the protocol team as white label, open source tools available to the community for branding, extending, and embedding into other applications, to enhance current ink-readers and e-readers with a wallet-module supporting Publica's protocol.

Why do authors support Publica's protocol?

1. Immediate direct payments, buyer to seller, reader to author.

2. Transparent sales ledgers — no audits required.

3. Expanded range of business models. Crowdfunding, online storefronts, scholastic and scientific institutions, patronage, serialization, collaborations, peer reviews, pay-as-you-read, public libraries, non-profits, etc.

4. Authors and their agents are as creative in their business models as in their books but are traditionally bound by a controversial "license" and EULA. [1] Publica's protocol replaces them with an access key that frees authors to discover new business models. The Publica protocol also supports time-limited READ Tokens that can be used for similar limited-ownership business models.

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[1] License agreements are how centralized publishers like Amazon, Rakuten/Kobo, etc., control ebooks. License agreements can be optionally used alongside the Publica protocol but they're not part of the protocol. License agreement violations can't be enforced by Publica — READ tokens can't be remotely erased from their owner's wallet — but agreements can be enforced by courts and legal jurisdictions in the normal manner. The Publica protocol supports time-limited READ tokens that can be used for similar limited-ownership business models.

Crowdfunding? Consider an ICO for a book, where the author sells READ Tokens as access keys to fund a book that will be written, edited, proofread, illustrated and packaged with the proceeds of the token sale.

5. Freedom to market, publicize, and sell to the whole world, without geographic restrictions, without fear of chargebacks, errors, or cheating. Sell in proprietary online storefronts too.

6. Strong resistance to censorship and tampering by the immutability virtue of blockchain-based storage. Finished works are automatically dated and fixed, no matter how many editions or variations are sold. [2]

7. Direct control over what to publish, at what price, in an ever-more-decentralised world of global ecommerce.

8. Long-lived ebooks, never abandoned by a publisher's fortunes or licensing model. The Publica protocol continues working even if Publica-the-organization goes away.

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[2] Copyright rules require a creative work to be dated in a fixed and tangible form of expression.

Protocol use case illustration

For illustrative purposes, we begin protocol illustration with authors, who use Publisher wallet-app and its GUI to set up commercial conditions for distribution of the reading access key (READ token contract) and deploy it to Ethereum blockchain. Before or after the contract is deployed, an author is submitting the literary work to decentralised storage and linking it to the smart contract. Now, the book or rather its access-key (READ token) is available for purchase in exchange for PBL tokens for a price set up by author.

Author is free to advertise its book in whichever way they find reasonable and once potential reader discovers it, she is purchasing READ token to access the book directly from the smart contract the author has deployed. Once READ token is purchased, reader app-wallet can access the content in decentralised storage as the public key matching the private key stored in the app-wallet is available in respective READ-token mapping.

What does the Publica protocol offer readers?

1. Lower prices. Payments go directly to the author's wallet with no intermediaries required.

2. Irrevocable ownership. Your ownership of a READ Token linking you to decentralised storage is immutable.

3. Secondary markets and persistence. Sell or give book keys as you wish. Ebooks on decentralised storage don't disappear.

4. "Radical inclusion." Authors can include their readers in crowdfunding and other business models that provide the capital to produce great book projects.

5. Lower-priced paper books. The protocol supports paper books with a participating print-on-demand partner. Print-on-demand where the reader is, no shipping. Eliminate waste in traditional large print runs and warehousing.

Protocol benefits for some publishers

Some publishers benefit from the status quo. Others benefit from innovation.

Protocol benefits for some publishers:

1. Direct control of publications-in-process, including review copies, editorial and illustration copies, pseudonymised peer review copies, translation copies, etc., and their ecommerce.

2. Direct, discrete, transparent transactions including wholesale, print-on-demand, new kinds of online storefronts, etc. Business secrets like negotiated prices aren't revealed.

3. Lower cost persistent, decentralised storage.

4. Business models that don't require End User License Agreements (EULA). Tokens aren't book copies subject to first-use and exhaustion rules.

Incentives for early contributors into protocol

1. Own a piece of the protocol. The Publica protocol requires Pebbles (PBL tokens) in a fixed supply. Pebbles are the sole medium of exchange in the Publica workflow.

2. Be an important part of tokenizing access and decentralizing storage of the world's information that's suitable for ecommerce. Wallet-to-wallet, starting with how big ideas and deep knowledge are shared - in books.

Benefits for classic liberalism and humanism

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1. Independence. The Publica protocol is open source, decentralised and immutable. Smart contracts, once set on a blockchain, work without third-party mediation.

2. Democratizing value and trust. Book buyers vote only with their own wallets. A radical inclusion of buyers and sellers, with their incentives aligned, mediated only by blockchains.

3. Spreading books to the under-booked, and the underbanked, around the globe.

The Publica team so far

Developers

Experienced blockchain developers at Scandiweb.com, a leading ecommerce site developer working on projects for Walmart, New York Times, Land Rover, Jaguar, Mitsubishi, L'Oreal and many more.

In the blockchain space, Scandiweb has partnered with Element Group to handle technology side for ICOs of Enigma, BlockV, Sense, and others.

Scandiweb is privately owned company by Publica's co-founder and COO Antons Sapriko.

Executive

Josef Marc, CEO. Project credits include CBS Olympics, DirecTV, Verizon, Sony, UNICT Rwanda.

Antons Sapriko, COO, founder of Scandiweb.

Yuri Pimenov, CTO, Bitcoin exchange pioneer.

Advisors

Marc Kenigsberg, evangelist for blockchains and corporate social responsibility.

Arne Krokan, digital economics professor, and author.

Sheron McCartha, fiction author, and self-publisher.

Jeff Scott, FinTech consultant, and an adjunct scholar at the Mises Institute.

Hundreds of Publica supporters on social media, called "Publicans."

Protocol components and App layer

Publisher app-wallet for authors

- Enables deployment of book-specific smart contract containing the terms of sale for an access key to the book, volume discounts, the total supply of access keys (READ Tokens) and other commercial features.
- Enables submitting literary work to the decentralised immutable storage and linking it to the deployed smart contract.
- Cryptocurrency and token wallet functionality to pay for the services of the protocol and get paid in protocol currency

Smart contract for PBL tokens - protocol currency

- Standard ERC20 contracts containing mapping of PBL owners with their balances and standard Approve function to allow interaction with other contracts within the protocol.

Smart contracts for READ Tokens

- ERC20 compatible token, unique for each book, represents a right to access a particular literary work linked to smart contract.
- READ Token smart contract is deployed by an author with the help of a publisher wallet-app with commercial conditions, chosen by the author.
- READ Token is bought by a reader in exchange for PBLs. To learn more about how the protocol enables trading tokens for tokens, please consult the project's GitHub.

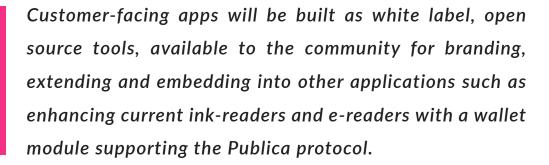**E-reader app-wallet for readers**

- Enables discovery and purchase of the protocol currency, and any literary works published with the Publica protocol
- Permits rendering of downloaded content in e-reader
- Enables storage and transfer of PBL and READ Tokens (wallet)
- In-app authorization and decryption, or sending requests to a remote node signed with a private key.

Decentralised storage

- Stores a literary work in a zero-knowledge distributed, decentralised, immutable storage.
- Preferably supports affordable re-encryption or access layer logic.
- Access, metered-streaming, and download operations.

Wallet Module for existing ink-reader and e-reader apps

- Wallet module to introduce private key and signing of requests to a conventional reader.
- Connector to a decentralised storage to request and download content that is linked to your READ Tokens, stored in your wallet and sent to the application for on-screen rendering.

Customer-facing apps will be built as white label, open source tools, available to the community for branding, extending and embedding into other applications such as enhancing current ink-readers and e-readers with a wallet module supporting the Publica protocol.

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│     DECENTRALISED PUBLISHING     │
│         PROTOCOL START           │
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┌─────────────────────────────────┐
│  Open publishing app-wallet for Authors. Free, open-source,  │
│  client-side interface, browser-based, like MyEtherWallet.   │
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       ╱─────────────────────────────────╲
      ╱  Use a GUI to set up the smart contract for sales of the book  ╲
     │        - READ Token price in PBL, volume discounts              │
      ╲           - locking the number of license keys                ╱
       ╲            - presale contract set up (Book ICO)             ╱
        ╲───────────────────────────────╱
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┌─────────────────────────────────┐
│  Pulling Solidity Smart Contracts template for selling READ access  │
│  licenses in form of an ERC20 token from the decentralised storage. │
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┌─────────────────────────────────┐
│  Adding book-specific values set up by an author to a smart  │
│  contract template, and deployment of the contract instance  │
│  to the Ethereum blockchain. The author is the owner         │
│  of the contract. An author is not charged PBL for           │
│  deployment, only Ethereum blockchain miner fees.            │
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      │  Use GUI to prepare your manuscript for publishing.  │
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│  Adding your manuscript - ebook to a decentralised  │
│  immutable storage and receiving back an access token.  │
│  The author is the owner of the transaction.  │
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┌─────────────────────────────────┐
│  Updating smart contract with an access token  │
│  to the e-book content in decentralised storage.  │
│  Linking book smart contract to its content.  │
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│     DECENTRALISED PUBLISHING     │
│         PROTOCOL END             │
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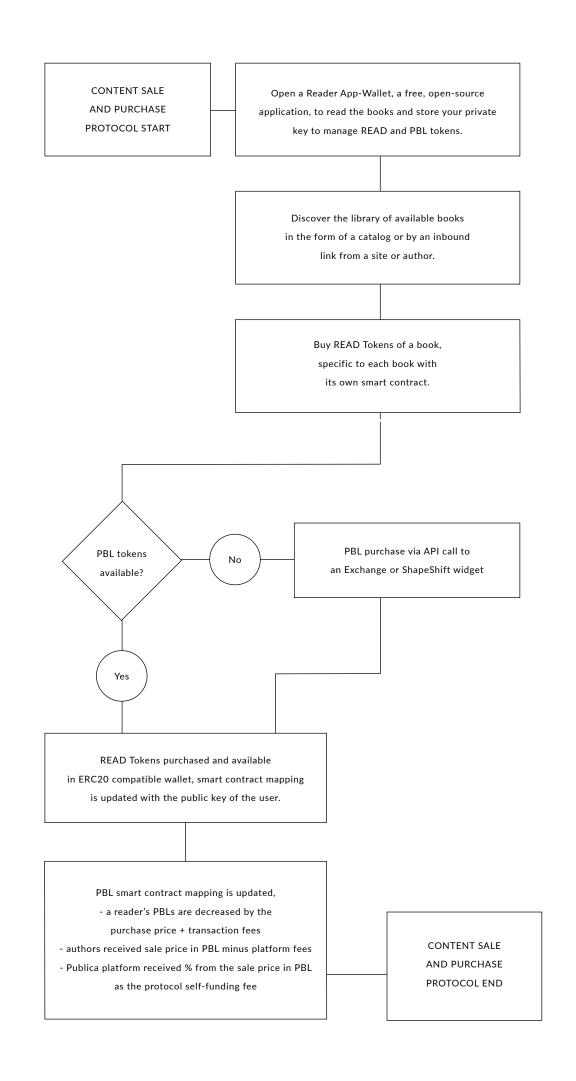
CONTENT SALE
AND PURCHASE
PROTOCOL START

Open a Reader App-Wallet, a free, open-source
application, to read the books and store your private
key to manage READ and PBL tokens.

Discover the library of available books
in the form of a catalog or by an inbound
link from a site or author.

Buy READ Tokens of a book,
specific to each book with
its own smart contract.

PBL tokens
available?

No

Yes

PBL purchase via API call to
an Exchange or ShapeShift widget

READ Tokens purchased and available
in ERC20 compatible wallet, smart contract mapping
is updated with the public key of the user.

PBL smart contract mapping is updated,
- a reader's PBLs are decreased by the
purchase price + transaction fees
- authors received sale price in PBL minus platform fees
- Publica platform received % from the sale price in PBL
as the protocol self-funding fee

CONTENT SALE
AND PURCHASE
PROTOCOL END

DECENTRALISED CONTENT ACCESS
PROTOCOL START

Open a Reader App-Wallet, a free, open-source
application, to read the books and store your
private key to manage READ and PBL tokens.

Update the library of the books available
to read (matching your READ Tokens).
In the simplest form, parsing smart contracts.

Select a book you want to access
that is not available in your local storage.

The application verifies that your private key
matches a public key stored in the book's
READ Token smart contract, and grant
access to the storage.

Content is read from storage such as a mounted
drive or collected from immutable shards.
Ideally, storage has access logic layer that can
verify request signing with a private key.

Content is loaded onto the device and rendered.

DECENTRALISED CONTENT ACCESS
PROTOCOL END

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This whitepaper contains forward-looking statements or information (collectively "forward-looking statements") that relate to Publica's current expectations and views of future events. In some cases, these forward-looking statements can be identified by words or phrases such as "may", "will", "expect", "anticipate", "aim", "estimate", "intend", "plan", "seek", "believe", "potential", "continue", "is/are likely to" or the negative of these terms, or other similar expressions intended to identify forward-looking statements. Publica has based these forward-looking statements on its current expectations and projections about future events and financial trends that it believes may affect its financial condition, results of operations, business strategy, financial needs, or the results of the token sale or the value or price stability of PBL Tokens.

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