PUBLISH

The World's Web 3.0 News Ecosystem

Version 5.3

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1. Abstract

The migration of newspaper newsrooms from the traditional to the digital democratized the way news is produced and consumed. However, with global social media platforms taking over as the primary outlet for news consumption, newspapers have faced formidable challenges in securing financial viability all the while maintaining journalistic integrity and trust.

PUBLISH aims to address these problems by offering news media organizations the tools and technologies necessary to help them navigate this increasingly competitive and complex landscape [1]. These include, but are not limited to, a token reward system to promote news reader engagement; a DID (decentralized identifier) solution to verify journalist credentials and combat disinformation by bad actors; a publish-to-blockchain solution to bring more transparency and traceability to news content; and the minting of literary NFTs to monetize news media content in ways that were not possible before. In doing so, PUBLISH aspires to restore balance to the newspaper industry and empower news media organizations to fulfill their emancipatory role.

This white paper is divided into three main parts. It begins by describing the current state of the newspaper industry. This is followed by a discussion of the problems faced by the newspaper industry and a description of the solutions developed by PUBLISH to address these problems.

2. Background and introduction

Founded in 2018, PUBLISH (PUBLISH, Inc.) is a digital solutions provider for media businesses including, but not limited to, newspaper and magazine businesses.

PUBLISH's mission is to secure the editorial and financial independence of news media businesses by giving them the tools and technologies necessary to combat misinformation and compete in an increasingly competitive landscape.

PUBLISH has been recognized for its work in this area by renowned organizations including WAN-IFRA, the Korea Press Foundation, the Ministry of Science and ICT, the Korea Information and Communication Industry Promotion Agency. In addition, it has partnered with prestigious associations, such as the Journalist Association of Korea and the Korea Internet Newspaper Association, to develop a press-credentialing system using DID technology based on PUBLISH chain. The company has also been selected by several global acceleration programs including those of Draper University, LongHash, and Yozma Group Korea.

While PUBLISH researches and invests in several emerging technologies, much of its focus is centered on blockchain technology, which has several potential applications in journalism. As an aid to editorial work, blockchains can serve as secure and auditable registries for important metadata, such as a news article's date of publication. Accredited journalists can be issued DIDs (decentralized identifiers), which can be used to gain access to press events or cryptographically sign off on news media content at the time of publication and included in metadata as verifiable bylines. Additionally, cryptocurrencies can be used to tip reporters and reward news readers for engaging with content or viewing advertisements. More information about how PUBLISH makes use of blockchain technology in its own applications can be found in section 5 of this paper.

3. Market overview

A booming digital advertising market

Newspapers have traditionally relied on revenue from print advertising and subscriptions, but over the years the news media industry has seen a transition from print to digital-based [2]. In 2017, the digital advertising market was valued at around US$230 billion and is expected to reach US$786 billion by 2026 [3]. However, the market is dominated by a handful of large social networks and general-purpose search engines, much to the exclusion of newspapers. According to Facebook's 2017 annual report [4], advertising revenues stood at US$39.94 billion, representing as much as 98% of its total revenue for the year, with the majority raised by mobile advertising. Google took an even larger share of the market with reported advertising revenue of US$95.58 billion, representing 86% of its total revenue [5], [6]. Together, Facebook and Google accounted for over 50 of total digital spending in the US [7].

The future of news media industry: digital subscriptions

Newspapers are seeing a shift from print to digital modes of consumption. According to their 2019 annual report, the New York Times' revenue increased by 0.9%, recording US$250 million. Although advertisement revenues decreased by 26% due to COVID-19, further revenue losses have been contained with the addition of more than 2 million digital subscribers [8].

According to a survey conducted by the PEW Research Center, 86% of respondents access their news through mobile phones. Moreover, more than half (52%) prefer accessing news through mobile and desktop over television and print newspapers [9]. Another survey also reports that six out of ten people read news through mobile, which correlates to a 200% increase in digital news subscription rates since 2013 [10]. News consumption is showing a definitive shift from analog to digital.

As a result of this shift, sales from the print products have decreased. For example, print newspaper advertisements decreased by as much as 42% in 2020 compared to 2019 [11]. In contrast, revenue from digital products, including increased from 10.5% to 14.7% of the share of total revenues. In the same period, revenue from the print newspaper sector decreased from 89.5% to 85.3% [12].

However, publishers still rely on advertising revenue as their main source of revenue. Consequently, more news publishers are likely to adopt subscription-based revenue models to compensate for the loss in volatile advertising revenues. In the same report, it was noted that between February and April of 2020, digital subscription rates in Europe and America increased by 115% and 92%, respectively [13].

Taking the New York Times Company as an example, the company experienced a 7.7% increase in

revenues to US$1.68 billion compared to 2016 [14]. This was primarily driven by a significant increase in digital subscription and advertising revenues, and only partially offset by a decrease in print advertising revenue.

However, as an internationally respected publication with a substantial reader-base, the New York Times may be regarded as an outlier, capable of offsetting the loss in print sales through aggressive revenue diversification efforts. For such outliers, the strategy of selling more for less is a viable option, but the same may not be said of smaller publishers, who do not experience the same economies of scale. Such small to medium-sized newsrooms that represent the bulk of the news media landscape have experienced an overall drop in revenue led predominantly by diminishing print sales, which still is the mainstay of the newspaper business [15].

Nonetheless, news consumption especially via digital devices is here to stay. While publishers face intense competition, news in terms of production output and consumer demand remains a market with vast untapped potential. Therefore, rather than worrying about the news media industry's future, the focus should be on how best to adapt to and take advantage of a booming digital subscription and advertising market [16], [17].

4. The problem

The news media industry is characterized by decreasing print sales and increasing digital sales. With a few exceptions, increases in digital sales have not fully compensated for decreases in print sales. There are several external and internal factors driving this trend. Externally, news media companies face strong competition from mega-platforms such as social media platforms and search engines such as Google. Internally, media deregulation and consolidation have eroded the quality of journalism both in terms of diversity and integrity. Together, these forces have worked to undermine the democratic process and the financial viability of independent newspaper newsrooms.

The emergence of social media platforms, fragmented readership, and misinformation

In the past, publishers relied on loyal readers for their base revenue and earned subsequent ad revenues. Today, however, readers increasingly get their news through social media platforms, which facilitate the distribution of large amounts of content, including low-quality content published by bad actors. Further, the media industry is also beset by its own set of problems, namely the erosion of journalism as a public good, resulting from media deregulation and consolidation.

Fragmented readership Today's readers do not opt for a single publication nor choose to passively remain exclusively subscribed to a single publication. Instead, they navigate to news articles via links on a handful of mega-platforms and curation sites like Facebook and Google that produce little to no editorial content of their own. For instance, according to a 2018 survey conducted by the PEW Research Center, more than two-thirds of US adults at least occasionally read news from social media platforms, with as many as 43% reading their news from Facebook [18]. In the beginning, publishers embraced these platforms to promote their brands and content, but it has become clear that readers often consume content from within these platforms, without visiting the website of publishers. News content distribution has become centralized [19] and quality content is often not a primary concern.

Misinformation What is more worrisome is that these large online platforms have made it easier for distribution of low-quality content to the public, most of which is delivered through social media. Loss of news credibility due to fake news is exacerbating public distrust in the media and the government [20]. For example, In South Korea, which consistently ranks among the lowest in terms of media confidence when compared to other OECD countries, one in four Koreans claim to have been exposed to misinformation [21].

Misinformation may also result in less holding accurate beliefs. According to a June 2019 poll conducted by the Centre for International Governance Innovation (CIGI), 86% of respondents were exposed to misinformation, with the majority not recognizing it as fake news [22]. This may have the effect of undermining the democratic process. While the role of news media is to inform and

educate the public, this function has been undermined by the prevalence of misinformation. But it is not only the emergence of fake news and external competitors that threaten the public and the newspaper industry. Journalism is also negatively impacted by media consolidation.

Increased competition due to media deregulation and consolidation

"The widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public." These are the words of US Supreme Court Justice Hugo Black in 1945 on preventing a merger between the Associated Press and other publishing companies [23]. He was speaking at a time when efforts to prevent media consolidation were well-supported and deemed to positively reinforce the First Amendment. During the 1980s, a new deregulatory view was brought into the conversation by the Reagan administration, and the Telecommunications Act of 1996 signed by Bill Clinton officially reversed the long-held stance against the deregulation of media consolidation. Similar laws were passed across the world and in South Korea, the former Lee Myung-bak government revised new media reform laws to lift the cross-ownership ban on newspapers and TV stations.

These Acts allowed near-unlimited corporate acquisition and ownership of media companies, and thus began the capitalistic frenzy of mergers. Most US media was held by just under fifty corporations in the early 1980s [24]. Today, as few as six corporations own over 90% of the entire US media industry (refer to Figure 1), a growing trend observed in the global news media industry. Diversity and antagonistic sources of information, the importance of which was emphasized by Justice Black, have long become a rarity; smaller independent publishers simply do not stand a chance to make it on their own in the face of increased competition from corporations chasing economies of scale through acquisition after acquisition.
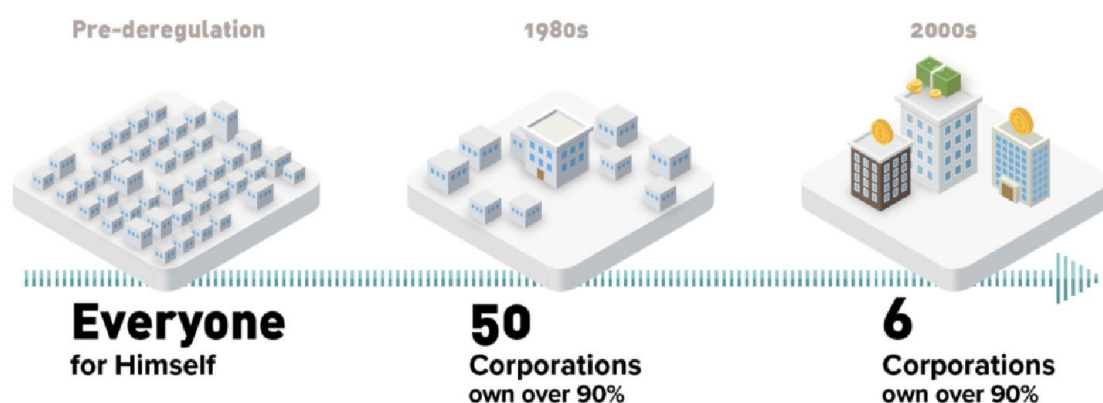

Figure 1. *Structure of media ownership before and after deregulation*

Conformity and censorship. The purpose of journalism is to provide the information necessary for the public to make the best possible decisions about their livelihood, societies, and governments.

While every medium offers a particular voice and perspective, corporate media and consolidation enforce conformity and suppress views that fall short of a specified range of interest. The oligopolistic dominance enforces ideological conformity and distortion, and the biggest danger is in that it occurs so discreetly that the formation of critical thought is suppressed without anyone noticing. The sheer number of uniquely branded publishers, broadcast stations and music labels suggest a deceptive impression that there is great diversity. However, there are only as many messages as the number of media conglomerates in the market, and alternative viewpoints are nearly nonexistent. The choice then becomes an illusion, feigned diversity, and simply another form of censorship.

Unscrupulous commercialism. Good journalism also presents a voice for the marginalized and exposes injustice, thereby working to hold those in power accountable. However, when the media is run by business leaders in place of journalists the pursuit of objectivity and truth is generally deprioritized. The longtime mainstays of high-quality journalism such as investigative journalism are shunned as they are deemed cost ineffective. Clientelist relations dictate what is published, turning the media into a convenient instrument for particularized interest. Deregulation has played a part in spearheading commercial exploitation within the media industry, which in turn has subverted the democratic role and value of journalism altogether.

Journalistic integrity is no longer a virtue in the industry, and journalists are forced to give up their conviction in playing the critical role of "agitators" against injustice.

Newspaper closures

Competition from online substitutes and corporate media has resulted in newspaper closures, job losses, and increased municipal borrowing costs.

Decreasing newspaper newsroom employees. Unsurprisingly, the number of employees working in the newspaper industry has declined in line with eroding newspaper revenues and closures. According to a PEW research report [25], from 2008 to 2017, newspaper newsroom employees working in the print news sector decreased by 45%, from about 71,000 to 39,000 workers, representing a loss of 32,000 jobs over the period. The digital sector fared far better with jobs increasing by as much as 79%, from approximately 7,400 in 2008 to 13,000 in 2017. However, in absolute terms, this modest increase of just 6,000 jobs did not offset the more significant job losses seen among legacy publishers relying on print news.

Increased municipal borrowing costs. A 2018 study [26] conducted in the US found that, following a newspaper closure, municipal borrowing costs increased by 5 to 11 basis points, costing the local government US$650 thousand per issue over a typical 10-year period. This is likely to be associated with higher government wages and deficits resulting from a loss of government monitoring

following a newspaper closure. It is therefore of critical importance that newspapers are allowed to subsist for their monitoring roles to retain investor confidence.

5. PUBLISH as a solution

It was noted that the proliferation of the internet has brought about fragmented news readership. Attracting and retaining a steady readership is pivotal to a publisher's success, but users have become increasingly indifferent to the publication they read. As a result, publishers are finding it increasingly challenging to maintain relevance and financial viability. What, then, can we do to enable sustainable journalism without compromising the journalistic integrity and democratic role of journalism? How do we address the problem of fragmented readership and publication indifference? Is it possible to create a media environment where antagonistic and diverse sources of information and views co-exist and flourish? How do we revive the failing world of journalism?

PUBLISH Protocol

PUBLISH Protocol is a proprietary network architecture with a token rewards algorithm built on the PUBLISH chain, a blockchain media mainnet. PUBLISH Protocol aligns incentive-driven participation between content publishers, editors, and users to spur growth. The protocol is developed in collaboration with PUBLISH Alliance, a consortium of media enterprises, technology providers, and service providers tasked with the protocol's development and proliferation.
Publishers can integrate the PUBLISH Protocol into their websites and create a token economy to monetize content and reward users. Publishers can also sell tokens to raise funds for the development and ongoing development of their platforms.

PUBLISH Applications

PUBLISH has developed several applications to help publishers transform their digital operations. These include PUBLISH soft, PUBLISH wallet, PUBLISH fact, PUBLISH iD, PUBLISH link, PUBLISH mint, News Thomas, PUBLISH chat, PUBLISH chain.

PUBLISH soft PUBLISH soft is a blockchain-based CMS (content management system) that facilitates the creation and management of news media websites. The CMS comes with an automated news content notarization service and built-in token reward system that allows news organizations to index news content on the blockchain.

PUBLISH wallet. PUBLISH wallet is a cryptocurrency wallet that allows users to securely send and receive PUBLISH-based tokens including NEWS token. It can be downloaded from Google Play Store and App Store.

PUBLISH fact. PUBLISH fact is a patented fact-checking platform. Users of the platform can stake tokens to request for an article to be fact-checked by trained fact-checkers, who are rewarded in NEWS token.

PUBLISH iD. PUBLISH iD is a DID (decentralized identifier) application built on PUBLISH chain, which provides journalists and news readers with a verifiable, decentralized digital identity.

PUBLISH link. PUBLISH link is a reader rewards service that directly connects readers and media outlets through a widget service embedded with Web 3.0 technology in a Web 2.0-based CMS (Content Management System). Based technology is an API (application programming interface) for a widget that allows publishers to integrate a token reward system into existing websites. The API significantly reduces time to market and makes the PUBLISH Protocol accessible to thousands of publishers without having to migrate to a new CMS.

PUBLISH mint. PUBLISH mint is a marketplace allowing publishers to mint and sell literary NFTs (non-fungible tokens) such as news articles. NEWS tokens are used as the primary means of exchange within the platform.

News Thomas. News Thomas is a news app that provides convenience and benefits to users while contributing to the advancement of the media ecosystem. This app utilizes MULTI CHAIN wallets and NFTs to offer users a secure and engaging experience, and it aims to create an environment for collaboration with media outlets to produce high-quality news.

PUBLISH chat. PUBLISH chat is an innovative comment reward solution that aligns with the era of Web 3.0. It integrates with PUBLISH link to enhance interaction between media outlets and readers, while encouraging reader participation through rewards. This solution enables media outlets to build more successful communities, while readers can feel their contributions are valued.

PUBLISH chain PUBLISH chain is PUBLISH's consortium blockchain mainnet catering to the media industry. PUBLISH chain has been designed with data-intensive media applications in mind. At the time of writing, these include SSI (self-sovereign identity), news content notarization, and NFT minting functions.

PUBLISH Institute for News and Technology (PINT)

On February 10, 2022, PUBLISH established the Institute for News and Technology, known as PINT, within the company with the purpose of exploring and proposing a new media ecosystem through research integrating news and technology, and achieving high-quality journalism through education. The vision of PINT is to become a specialized institution for journalism research, education, and policy, combining news and technology. Its mission is to experiment and propose a new media ecosystem through journalism research, education, and policy that integrates news and

technology, and to realize high-quality journalism.

PINT conducts various projects, including:

① Independent research determined necessary by the institute. ② Participating in collaborative research commissioned by external organizations and conducting joint research with them. ③ Organizing regular and irregular forums and seminars. ④ Publishing various regular and irregular research reports. ⑤ Providing education for media professionals and media entrepreneurship. ⑥ Developing and implementing educational curricula that integrate and merge journalism-related technologies with journalism majors. ⑦ Collaborating and conducting research and education with overseas media-related research institutions, educational institutions, and professional organizations. ⑧ Providing consulting services for the media industry and media companies. ⑨ Conducting research commissioned by PUBLISH and its subsidiaries. ⑩ Providing education for PUBLISH and its subsidiary employees. ⑪ Conducting other media-related research and education.

For more details, please refer to the PUBLISH Institute for News and Technology (PINT) website at https://publishinstitute.org/.

PINT, as an in-house research institute of PUBLISH, aims to be the compass in the era of a transformative news ecosystem centered around Web 3.0 technologies. To achieve this, PINT is composed of experts with a deep understanding and insightful analysis of the past, present, and future of the domestic and international news ecosystem. They are professionals from the industry and academia who establish the philosophy, direction, and policies of the Web 3.0 news ecosystem built by PUBLISH. Additionally, PINT takes primary responsibility for evaluating and making proposals for PUBLISH's overall Web 3.0 news ecosystem. Furthermore, PINT actively strives to become a world-leading research institute that leads the way in the Web 3.0 news ecosystem, going beyond being PUBLISH's in-house research facility.

Technical abilities and functions

PUBLISH utilizes both on-chain and off-chain technologies. On-chain technology, also known as distributed ledger technology, is used to securely store hypermedia content in a public network composed of nodes and to grant copyright to content creators. Off-chain tokens or smart contracts, which are essentially centralized in nature, represent on-chain tokens in digital format and are used to fairly calculate and distribute rewards within the PUBLISH ecosystem. PUBLISH utilizes off-chain transactions, rather than relatively slow and expensive on-chain transactions, enabling near-instant settlement with a zero fee.

It also uses P2P storage technology through blockchain and Interplanetary File System (IPFS) to permanently store documents or files, and to build a powerful solution that gives copyright to content creators. This allows the PUBLISH Protocol to store articles or any file in a new P2P system without a centralized storage device and enables a powerful core API that prevents any type of manipulation or tampering.

Reward mechanisms. Smart-contract-based rewards algorithm is designed to create incentives to encourage desired user behavior and align incentives between publishers and users to drive website growth.

Data security. All news media contents submitted by the creator and published by the editorial department are stored within the IPFS along with hash values of files securely encrypted within the blockchain network. The two-step storage provides high-quality protection against the copyright of the creator. Unlike other blockchain-based media projects, PUBLISH can modify and delete content published through digital notarization protocols if an agreement is reached between producers and media companies.

Smart contract. The off-chain smart contract feature built into the protocol is used to identify and store submitted and published articles/posts. PUBLISH utilizes smart contract technology in the production of news content and the token compensation process.

Digital notarization. Digital notarization is used to authenticate the copyright of news content. This allows for encryption and storage of the original content, the server link, date and time, and the content-creator information. Digital notarization is a protocol that provides secure and convenient content authentication, modification, deletion, and ownership transfer. Another characteristic of this system is that the owner or group of owners can verify the authorized history of the document.

IPFS (InterPlanetary File System). IPFS is a complete P2P network that enables secure storage of hypermedia content. IPFS's decentralized storage nature combined with blockchain boasts unprecedented security. The original content of the news is stored within the IPFS network. The content received and stored within the blockchain works as an encryption link to the content called a hash pointer.

Market expansion strategy

A solid market expansion strategy is critical for the success and proliferation of PUBLISH's solutions and technology. One way of achieving this is through PUBLISH Alliance.

PUBLISH Alliance is a consortium of media companies, technology companies, service providers, and academic institutions that aims to restore balance to the media industry through blockchain-

based technologies and standards.

Latest business ventures and news can be viewed on the official PUBLISH website: https://www.publishinc.io/en/

6. Token economy

NEWS tokens

The NEWS tokens ('NEWS') is a native utility token that is used for all transactions in the PUBLISH ecosystem and its applications. The NEWS was initially distributed through IEO, marketing events and private sales, and is now listed and available on multiple exchanges. This chapter introduces PUBLISH's token economy that the publishers can use and provides examples of how publisher companies can utilize NEWS.
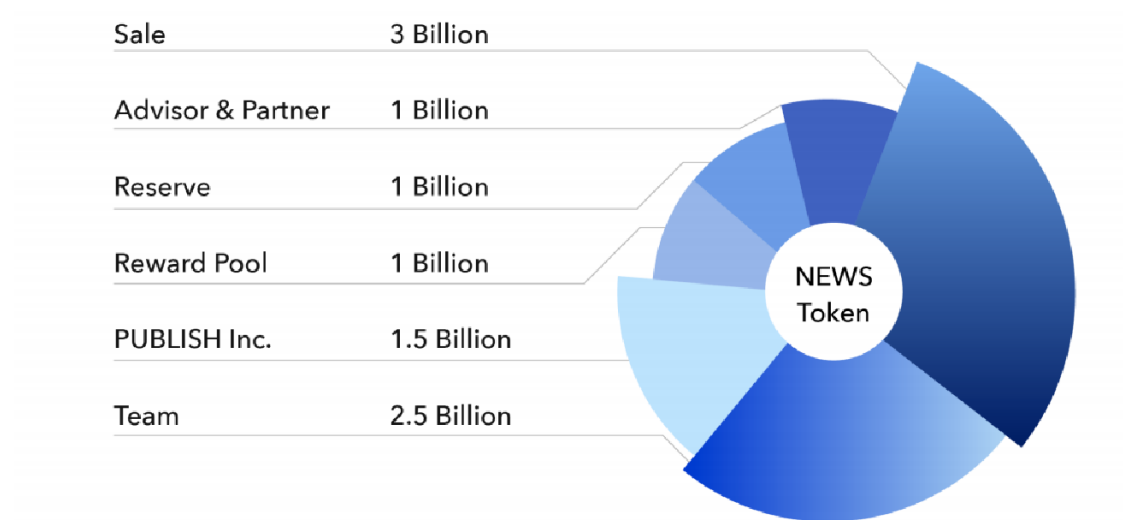
Sale	3 Billion
Advisor & Partner	1 Billion
Reserve	1 Billion
Reward Pool	1 Billion
PUBLISH Inc.	1.5 Billion
Team	2.5 Billion

Figure 2. Token distribution

Development 50%	Platform Management 30%	Marketing 10%	Legal 10%

Figure 3. Fund usage

Price stabilization strategy

NEWS tokens can be freely traded through exchanges, but large amounts of token sales or some malicious cryptocurrency speculators can threaten its stability. It is also extremely difficult to stabilize the price of NEWS tokens because it is determined by large selling and by the price changes of key currencies such as BTC and ETH. Most existing blockchain platforms are suppressing mass sales by delaying the withdrawal of users and token holders through devices such as the deposit withdrawal delay system, but this is only a short-term strategy.

Currently, users can withdraw NEWS tokens immediately at any time and sell them on the exchanges. To stabilize the price, the most viable strategy is to create meaningful demand for NEWS tokens by

publishers, advertisers and users who must purchase or stake NEWS tokens to use PUBLISH applications.

Basic reward strategy

All rewards within the PUBLISH-based news media ecosystem are provided through a reward pool. However, it is impossible to constantly issue rewards from the initial reward pool, so the amount of reward to be issued to users is adjusted or reduced based on the inflation of each news media company's token economy that adopts PUBLISH's solution. Since the reduction or adjustment in content reward due to limited quantity can demotivate quality content creation, these adjustments need to be verified by operations rather than prepared through mathematical calculations. Thus, the reward system can be reasonably changed at any time with the consent of token holders during service operations.

Participant reputation system

Although the general content management and supervision authority are owned by the company, in the case of blockchain-incorporated projects, oftentimes there is a shift in power towards the token holders to determine whether the content should be blocked by votes. The loophole of such a system is that a single or a handful of users can abuse this system and manipulate content if they hold far more tokens compared to other users. To combat such possibilities content management and supervision must be managed by the companies themselves; in addition to this, PUBLISH introduces a participant reputation system enabling reasonable token rewards for high-quality content production and curation. Further, modification or deletion of the content will be decided by the senior editorial department and publication of certain content will not be regulated depending on its reputation though users may evaluate it. By introducing these systems, media companies can improve content quality more fairly and quickly by adopting PUBLISH Protocol.

Token economy, stakeholders, and the reward system

News content producers. When a producer submits a new article, they must stake NEWS tokens. If the published article receives an "upvote" they will be rewarded with tokens.

    Token staking. When the producer is submitting an article to the editorial team, they must stake NEWS tokens. Once their article is published, they can either maintain their staked amount or withdraw. Once they withdraw, though their rights as "publisher" remain, they must stake a certain amount to be able to produce another article.

    Token reward. There are two basic ways in which producers can acquire NEWS tokens. First, successfully publish the article and get the NEWS token as a reward. Second, receive NEWS tokens through consumers. All published news content can receive an "upvote" from users, and every "like"

will be converted into NEWS tokens. As a result, content producers will receive additional rewards for quality work.

Editors. To be an editor, you must stake coins. If you edit a new article, you will receive a reward.

Token staking. When applying for Editorial Qualification or integrating PUBLISH link, the applicant must stake NEWS tokens. Once qualified, the number of NEWS tokens can remain staked or withdrawn. Once withdrawn, the official qualification as a community editor is valid, but participation in editing activities is limited until the token is staked again.

Token reward. If the designated senior editor's assignment is edited well and the article is published, the editor will receive a share of the media's advertising revenue in the form of a NEWS token.

News content consumers. Consumers need to stake tokens to leave comments. If they leave a response to an article, they will be rewarded accordingly.

Token staking. For consumers to write comments as a form of interaction, a certain amount of NEWS tokens must be staked. NEWS tokens can be maintained or withdrawn, but they can only write comments if the token is staked. If another user leaves a "like" in the comment, the user who left the comment will receive the NEWS token reward.

Token reward. Consumers receive NEWS tokens when they select and read new content. Various technologies can be applied to prevent abuse by subscribers. For example, the act of only opening an article to receive a reward should be dealt with appropriately. Even identifying a typing error can result in compensation.
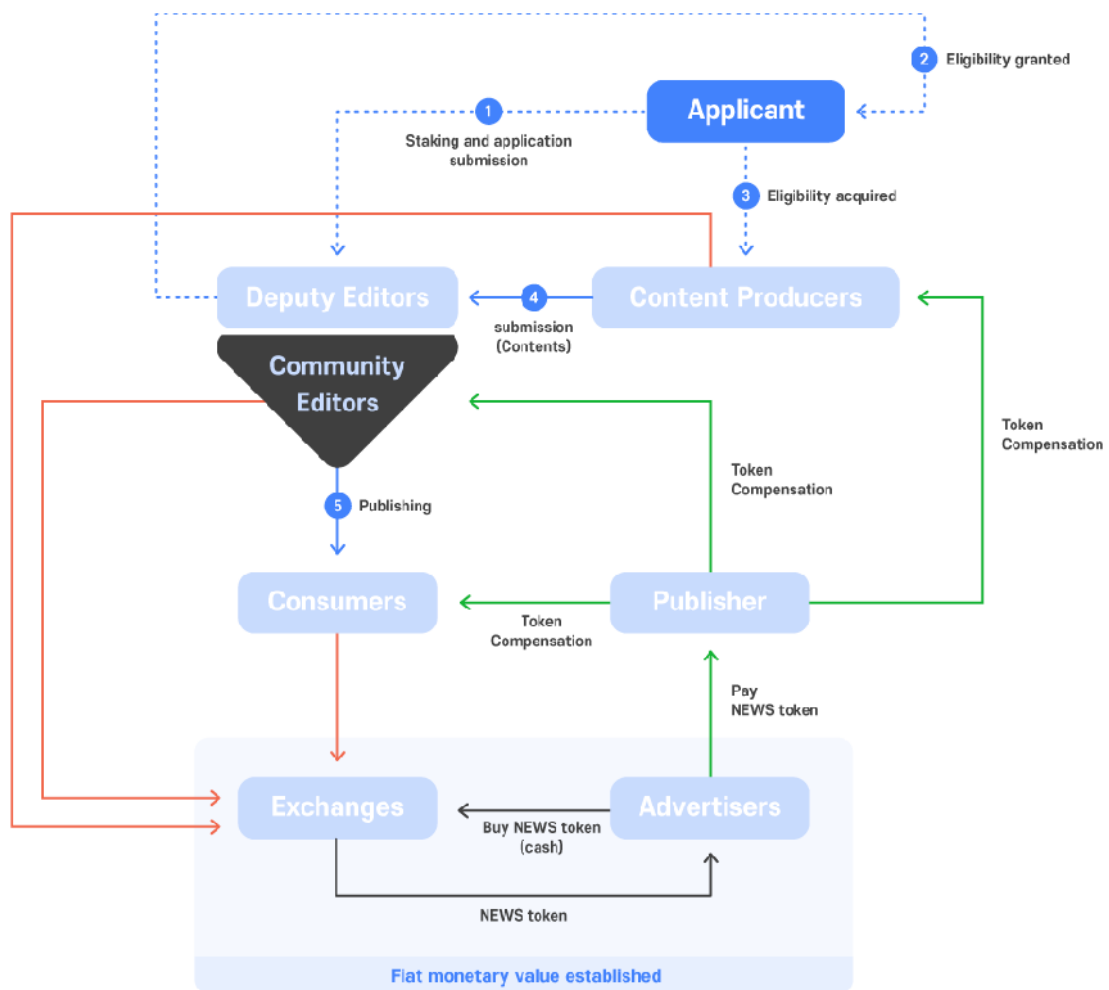
Figure 4. *PUBLISH token economy*

7. Roadmap

2010.12 FxWirePro launch to provide foreign exchange news service to financial institutions

2011.02 Sign partnership with Metaquotes to provide newswire service to FX brokers [27]

2013.11 Sign partnership with Tradingview

2015.07 EconoTimes Launch

2015.08 EconoTimes PRO Launch

2015.11 FxWirePro starts Bitcoin newsfeed [28]

2016.08 经客时代 launch

2016.11 FxWirePro, launches 'Currency Strength Index' [29]

2017.02 TokenPost.kr launch [30]

2017.10 TokenPost.kr surpasses 10,000 email subscribers

2017.11 Found PUBLISH

2018.03 Mint world's first cryptocurrency by a news site (TokenPost Coin) [31]

2018.06 Host 'Blockchain Open Forum' [32]

2018.07 TokenPost.com launch

2018.10 Incorporate PUBLISH, Inc. in Seoul, South Korea, PUBLISH whitepaper 1.0 (English, Chinese)

2018.11 PUBLISH Alliance launch (Investing.com becomes the first member)

2019.Q1

PUBLISH Protocol Beta Test launch

PUBLISH soft alpha version launch, starts sales

Conducts NEWS token IEO

2019.Q2

NEWS 3.0 PUBLISH soft beta version launch, continues sales

2019.Q3

Updates bug bounty

PUBLISH wallet android version launch

Conduct world's first 'news blockchain notarization' test on TokenPost

2019.Q4

PUBLISH soft 1.0 launch

Sets up in-house research department

Award 'Best Digital Media Startup' by WAN-IFRA [33]

Receive equity investment from Venture Square (High-tech focused accelerator)

2020.Q1

PUBLISH exchange PoC launch

PUBLSH soft 1.4 update
Receive "Venture" certification

2020.Q2
Renam 'TokenPost Coin' to 'NEWS KRW' on TokenPost
Select as a media start-up supported by the Korea Press Foundation [34]
Select as a recipient of the Ministry of Science and ICT's "K-Global Accelerator Cultivation [35]
Program launch in-house media innovation lab 'PUBLISH Lab'

2020.Q3
Sign strategic partnership with 'NDSoft', Korea's #1 CMS provider [36]
Award "Fact-checking, searching, and managing content via blockchain" patent [37]
Participation in the Singapore Exhibition, CTA2020 Online Exhibition Booth

2020.Q4
Develop a new media platform for Korea's Local Broadcasting Association [38]
Establish Singapore branch, PUBLISH Soft Pte. Ltd. [39]

2021.Q1
Sign NDSoft M&A agreement
Receive equity investment from JHL Capital (blockchain specialized Private Equity)

2021.Q2
Award BBB by Xangle Credibility Ratings [40]
PUBLISH wallet 1.1 launch [41]

2021.Q3
Lead the National Treasure "Hunminjeongeum Haerye" NFT Project [42]
PUBLISH chain alpha version launch [43]
PUBLISH iD alpha launch [44]
Invest into Eventing, local merchants' promotion application

2021.Q4
Sign strategic partnership with 'Journalists Association of Korea' [45]
Sign strategic partnership with Korea Internet Newspaper Association [46]
International Federation of Journalists Session Presentation: blockchain-based media ecosystem [47]
PUBLISH Alliance 1st Partner Announcement [48]
PUBLISH Alliance 2nd Partner Announcement [49]
PUBLISH link beta launch [50]

Won "Non-Fungible Token (NFT)" category award at 2021 TADS Awards [51]

2022.Q1
Launch 'PUBLISH News and Technology Research Institute' (PINT) [52]
Join launching of Korea Center for Investigative Journalism, 'Newstapa Journalism School'
Sign strategic partnership with 'YFUND', Peer-to-peer (P2P) investment platform [53]
Start integrating PUBLISH link into PUBLISH Alliance members
Acquire 'Quality Management System Certificate' (ISO 9001:2015) [54]
Acquire 'Compliance Management System Certificate' (ISO 37301:2021)
Acquire 'Anti-Corruption Management System Certificate' (ISO 37001:2016)
Invest into 'LINCRUX', Korean kiosk company [55]
Invest into 'Space Ade', office space solution company
Invest into 'Space Ade', Peer-to-peer (P2P) investment platform

2022.Q2
Sign strategic partnership with 'World Vision' non-profit organization [56]
Sign strategic partnership with 'JTBC' broadcasting company [57]
Prepare for PUBLISH mint
Prepare for PUBLISH chat
Listing of NEWS token on Gopax exchange [58]

2022.Q3
Sign strategic partnership with 'Lambda 256' [59]
Launch of PUBLISH mint [60]
Receive investment from META CANVAS (Web 3.0 Venture Builder Company)
Surpass 30,000 PUBLISH iD users
Surpass 100,000 NEWS token holders

2022.Q4
Sign strategic partnership with the 'Mongolian Journalists' Association' and 'Mongolian Web Association' [61]
Implement compensation policy program for media professionals
Mint first news NFT via PUBLISH mint: Endangered species NFTs [62]
Receive equity investment from Chosun Ilbo (South Korea's #1 media outlet)
Surpass 350,000 NEWS token holders

2023.Q1
Use NEWS token as a reward at commercial bank-affiliated fintech company [63]
PUBLISH News and Technology Research Institute (PINT) releases the "2022 Perception Survey of IT

Professionals in the Press" report [64]

PUBLISH News and Technology Research Institute (PINT) publishes a report on "Analysis of Internet News Usage Traffic in Korea" [65]

Launch of PUBLISH link Beta version

Listing of NEWS token on Bithumb (a local exchange) [66]

Prepare listing of NEWS token on global exchanges

Prepare of PUBLISH STO platform

Prepare of PUBLISH DAO platform

2023.Q2

PUBLISH News and Technology Research Institute (PINT) publishes a report on "Challenge towards blockchain ecosystem" [67]

PUBLISH News and Technology Research Institute (PINT) publishes a report on "The next ecosystem after the 'portal' ..." [68]

Implement of "Tip-off NFT Campaign" for tokenizing articles [69]

Showcase Korea Journalists Association's Press DID at the 2023 World Journalists Conference [70]

Signing of MOA between Mongolian media outlets and journalists for Press DID and PUBLISH link [71]

Launch of PUBLISH chat [72]

Prepare of PUBLISH survey platform

Prepare of PUBLISH advertising platform

Beta release of PUBLISH chat (comment reward solution)

Listing of NEWS on LBank (a global exchange) [73]

Listing of NEWS on CoinTR (a global exchange) [74]

Listing of NEWS on BingX (a global exchange) [75]

2023.Q3

Beta release of PUBLISH B2C app tech-specific DApp

Prepare of PUBLISH chain

Prepare of PUBLISH fact (Fact-checking system)

Prepare NEWS swap platform

Apply big data and AI

Additional listings on local and global exchanges

2023.Q4

Launch of PUBLISH chain

Beta release of PUBLISH advertising platform

Beta release of PUBLISH survey platform

Release of Mongolian Journalists Press DID

Additional listings on Mongolian and local/global exchanges

Reach 1 million NEWS token holders

Reach 100 alliance member companies

2024.Q1

Prepare PUBLISH open-source platform (one-person media)

Additional listings on local and global exchanges

2024.Q2

Apply Virtual Asset Service Provider (VASP) licenses

Beta release of PUBLISH fact (Fact-checking system)

Beta release of PUBLISH DAO platform

Additional listings on local and global exchanges

2024.Q3

Beta release of PUBLISH STO platform

Beta release of NEWS SWAP

Additional listings on local and global exchanges

2024.Q4

Listing on local exchanges for global expansion

Expand business to Southeast Asia regions

Reach 10 million NEWS token holders

Reach 1,000 alliance member companies

Additional listings on local and global exchanges

2025

Beta release of PUBLISH open-source platform (1-person media)

Expand business to Europe and Africa regions

Reach 30 million NEWS token holders

Reach 10,000 alliance member companies

Additional listings on local and global exchanges

2026

Expand business to North America region

Reach 100 million NEWS token holders

Reach 50,000 alliance member companies

8. Team

Key executives

[Meet the team](#)

Advisors

Yang Yong Seok

Tax Advisor

Eun Jung Oh

Legal Advisor

9. Legal notice

As of the date of publication of this white paper, the NEWS coin has no potential use other than the features mentioned in the PUBLISH white paper.

This white paper does not take the form of brochures or proposal documents, nor is it a sales proposal, nor is it a proposal to purchase investments or financial instruments from any jurisdiction. NEWS coins should not be acquired for speculative or investment purposes in anticipation of profit or immediate resale. No commitment to future performance or value, no commitment to intrinsic value, no continuous payment commitment, and no guarantee that the token will hold any value. Do not participate in selling the tokens of PUBLISH unless you are ready to cover the full amount allocated for the purchase. The NEWS coin does not constitute an actual equity investment in PUBLISH, and the NEWS coin does not grant any rights to it. The NEWS coin is sold as an in-platform utility, and all revenue received from PUBLISH can be used by PUBLISH for free without limitation, unless otherwise specified in the white paper, and there are rights to change the token distribution and fund use in the white paper.

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This white paper contains references to third-party data and industrial publications. PUBLISH believes that this industry data is accurate, and its estimates and assumptions are reasonable, but there is no guarantee of accuracy or completeness of this data. Third-party sources generally say that the information contained in it is from reliable sources, but there is no guarantee of the accuracy or completeness of the information contained. Although the data is believed to be reliable, we have not independently verified the data from third-party sources mentioned in this white paper or identified the underlying assumptions on which such sources depend.

PUBLISH is in the process of conducting legal and regulatory analyses of the functionality of the NEWS coin. Following the conclusion of this analysis, PUBLISH may modify the intended functionality of the NEWS coin to comply with the legal or regulatory requirements applicable to us. If we decide to modify the intended functionality of the token, we will update the relevant section of this white paper and upload the latest white paper to our website.

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