Sapien: A Decentralized Online Content Publishing, Consumption and Monetization System

Information for Evolution

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Abstract: Application of blockchain technology to establish a decentralized digital media platform designed to ethically deliver high quality content that is valuable to consumers. The platform uses a decentralized governance model for decision making on the publishing and moderation of content. The platform aims to disrupt existing models of media that corrupt the tools of public awareness, expression and education.

Vision: Empower creative and authentic expression for the benefit of humanity.

Introduction:

A decentralized oversight mechanism designed to enable fast quality control of the content published on the platform while reducing agency risks of censorship and information manipulation.

Those who control the Media are poised to manipulate the public narrative. Public and private entities around the world are afforded such power within the realms of the laws of their land.

Digital Media platforms that took over the global narrative built themselves up for scale, and managed relevance for users through massive content moderation operations and highly personalized and bias inducing algorithms. This may have worked well for some time but as computing power and its open access keep increasing, the challenge of keeping content feeds safe, unbiased and valuable grows.

Media interests and regulations vary by country and demography. Gaining consensus in this respect legitimately is intended by the platform through quality control. The platform must strive to govern content to keep itself within the bounds of the law of the land as applicable for a user.

The platform would be governed keeping with the purpose of expanding the space for creative and authentic expression in human lives everywhere.

We break down the media industry's game into the actors that play key roles in the system.

Problem:
Media is filtered by the five filters. As defined by Noam Chomsky in his book manufacturing consent.

Ownership/Source Network: They make decisions on what should go on a platform and what should not and is biased by its media network's reach in terms of the information collected. These may serve individual interests at opportune moments. Hence, we need a system which is not just censorship resistant, we need a system that is centralisation resistant.

Advertisers: Advertisement is one of the main sources of revenue for News media networks, and this enables big ticket accounts in influencing media reporting.

Political Information Trade and Networks: As the government and politicians have control over and access to dissemination of information in their purview, this highly valuable source of public information is able to trade in information with reporters and media networks.

Flak: By threatening the reporter and publisher of dire consequences, powerful entities and collectives push for censorship.

Common Enemy: By using the media to portray a common enemy, for example when the government makes a foreign nation a villain to rally its people to support nationalistic policies where they may not even make sense.

Key Actors and their Concerns:

1. Owners/Shareholders:
    a. Profit
    b. Biases and agendas
2. Editors:
    a. Continuity of Employment
    b. Salary
    c. Relevance and Identity in the Industry
    d. Professional Ethics
3. Reporters:
    a. Continuity of Employment
    b. Salary
    c. Relevance and Identity in the Industry
    d. Professional Ethics
4. Advertisers(Private, Government, Political):
    a. Government and Political Advertisers
        i.   Public Perception
        ii.   Control of flow of information
        iii. Influencing Media through Public Enterprise Advertisements directed by ruling party
    b. Private:
        i.   Public Perception
5. Consumers
    a. Information in Public Interest
    b. Information on Opportunities
    c. Awareness of the environment in individual context

Economic Inefficiencies:

    a. Collusion between Editors, Owners, Reporters and Advertisers, to prioritize their needs and concerns before those of the consumers.

    b. Owners and Editors are in direct collusion for their mutual benefit and interests, the onus of discerning reality is left on the readership. This being a closely knit relationship has the scope for a lot of manipulation and control of stories brought in by reporters.

    c. Reporters and Governments/Political Parties can find opportunities to get stories and influence public perception by trading in information for favors.

    d. Advertisers and Owners collude to increase the profitability of media in exchange for favorable representation.

Current Process:

In the Industry, the current process of publishing news media is as per this timeline of events:
1. Occurrence of Event
2. Record of Event
3. Reporting of Event
4. Editorial Decision Making and Review of News Report
5. Publishing
6. Public Consumption

We propose a solution that disconnects some of these actors from each other, and attempts to reduce the time between the occurrence of an event to its public consumption to reduce the ability of malicious actors to collude.

Proposed Solution:

"One of the objects of a newspaper is to understand the popular feeling and give expression to it, another is to arouse among the people certain desirable sentiments, and the third is the fearlessness to expose popular defects." – Mahatma Gandhi

There is great public value in authentic information on their interest, environment, and world. The same is not tapped into very well by existing structures of the industry and market.

What is the definition of authentic, for us it is that which a publisher can defend to be verifiably true and of public value. A wide space for many views to coexist, it is not, irrelevant, privacy invading, unsecular, divisive, (unrated)adult and age sensitive, biased, hate propagating etc.

There is an argument for the internet itself having been the solution for decentralizing publishing power. Our view of the same is that, now talk has become cheap. The amount of information has increased but the quality and quality control has reduced.

A simple example of our changing reality are deep fakes, we have the ability to generate information and content faster than ever before. This gives actors the ability to insert their manipulation between the process of an event being reported and published as News.

This increased publishing of generated and other types of data only serves as spam to the attention of the masses keeping it away from other media that may be more relevant and valuable to consumers en masse.

While there is the argument that quality control is the enemy of free expression, in a world where data and information generation capabilities are growing exponentially censorship of the irrelevant and grossly malicious becomes a more important need.

Content Moderation as per a consistent policy, is important for securing a platform's brand and also for ensuring its legitimacy. The same is a major issue for social media platforms that spend billions of dollars on ensuring the same. Reference: https://www.cnbc.com/2021/02/27/content-moderation-on-social-media.html

Supporting Arguments for Choice of System Design:

1. To get a perspective on the possibility of a game designed to extract the truth through cooperation between actors, let's be clear, the closest thing to absolute truth is that which recorded the event on occurrence. In reality, the accepted truth is that which most people believe to be true given the facts that are made available to them till the time in question. A game designed to incentivize cooperation in integrity and disincentivize cooperation falsehood, would break as long as the benefit outside the economic system in question is higher than the economic loss within the system of the actors in question. Refer economic paper only if required:

2. There is also the admission that consensus on information validation is subject to errors in individual information processing. Information made available to a set of publishers to come to a consensus on, can be interpreted differently without malice, delusion or overestimation of individual knowledge possessed. This is doubly so, in the case of publishing of news media where generalists and specialists common knowledge and perceptions vary. Hence, their processing of information can lead to differing views that prevent consensus. Refer economic paper only if required:
https://cpb-us-w2.wpmucdn.com/campuspress.yale.edu/dist/4/1744/files/2017/07/21.-Game-Theory-without-Partitions-and-Applications-to-Speculation-and-Consensus-1989-15ueyko.pdf

3. To conclude, a game designed to increase the interplay of players' integrities would fail when the external benefits outweigh the internal economics of such a choice. Games that require evaluation of subjective information, would lead to varying consensus on the basis of the varying information processing properties of the actors in question. Hence, we design a game that looks for consensus in micro-majorities allowing for multiple subjective viewpoints to be published in micro-consensuses. To reduce malice, we allow everyone not already decided on supporting a micro-majority to vote against it, to prevent the micro-majority's action from being effective on the platform and the consequent destruction of value of the remaining actors/stakeholders not incentivized by malice.

4. We also use electible and rejectible roles, to give additional subjective voice/voting power in the context of their subjective fields. For eg. NFTs for experts in economics, to have extra voice or voting capability when voting on a story tagged into the economics section of News Media on the platform. These holders can be elected and rejected by people who hold the platform's fungible tokens(Sapien Tokens).

5. Our micro-majority or micro-consensus mechanism also enables quicker publishing hence reducing the time between the occurrence of an event and its consumption by the public.

How the design addresses the 5 filters:

1. Ownership/Sourcing Network: Decentralized Network, Ownership and funding

2. Advertisers: Disconnected from the reporting process, onboarded onto the platform advertisement process
3. Political Information Trade and Networks: Reduced ability to control dissemination post event occurrence by reducing ability to delay
4. Flak: Anonymous reporting and Publishing capabilities
5. Common Enemy: Decentralization and community alignment against the common enemy of environmental factors reducing the space for honest reporting and creative expression.

Actors in the Sapien System:

1. Publishing Power NFT holders:
   a. Regional Publishers - Get additional Voting power for news tagged to their region. These holders can be voted out of the system, by token holders.
   b. Subject matter experts and publishers - Get additional Voting power for news tagged to their field/subject. These holders can be voted out of the system, by token holders.

2. Sapien Tokens:
   a. Shareholders/Decentralized Ownership - Only holders having more than a 0.01% of share, own plus delegated to them, can view and participate in publishing. They are subject to losing holding on censorship due to policy violation. Penalty can be as high as 5%.
   b. Self-Verified Publishers - Accounts that stake more than 0.001%, own plus delegated to them, can skip publishing approval but are subject to losing stake on censorship due to policy violation. Penalty can be as high as 25%.

3. Reporters: Need not hold any of the system tokens to participate, other than the minor storage related cost collected from them on content submission. The same can be paid using any supported token of their choice, pegged to the USD value of the same.

4. Advertisers: Need not hold any of the system tokens to participate, other than the amount they use to place a bid, which will be evaluated as per the USD value of their supported bid tokens.

5. Consumers: Need not hold any of the system tokens to participate, they can pay for reading any content piece using any supported tokens as per its USD value.

Publishing Process:

   a. **Micro-majority:** Reporters submit articles for vetting by publishers, publishers vote to gain a micro-majority. A micro-majority is defined as the condition when a proposed article gains at least 0.01% of voting power, and the winning vote is at least twice the losing vote. Example: 0.01% of votes for publishing an article win that decision if the votes for censorship are 0.005% or less. If publishing or censorship votes are less than 0.01%, no interim decision is observed.

   b. **Interim Decisions:** Publishing decisions are made by a micro-majority, these are decisions that have not been concluded as final and can be defeated. The governance gives a content publishing decision 30 days to be fortified. The final decision is made as per the final state at the end of voting. Example: A content piece is published after getting 2% censorship votes and 5% publishing votes at the end of 30 days even if censorship votes had overtaken publishing votes in the beginning.

   c. **Subjective Voting Rights:** Additional Voting powers are attributed to certain users owing to their knowledge on a subject matter. These are accessible through publishing rights NFTs made available to

NFT voters are given higher vote weight(0.01%) for content corresponding to their designated area of content tag/type(eg. Tokyo NFT holder voting on Regional News for Tokyo). This enables the platform to get some of the benefits of centralization in improving specific or contextual knowledge based voice in the system.

These mechanisms improve the speed to publish and also make room for subjective realities to coexist. Losing voters lose holdings as per the type of vote power token they used on a proposed article. NFT Voters, they are allowed 4 strikes before their powers and NFT is revoked. Self-Verified Publishers can lose upto 25% of their staked holdings. Big Shareholders can lose upto 5% of their holding.

Sapien System Content Pipeline:
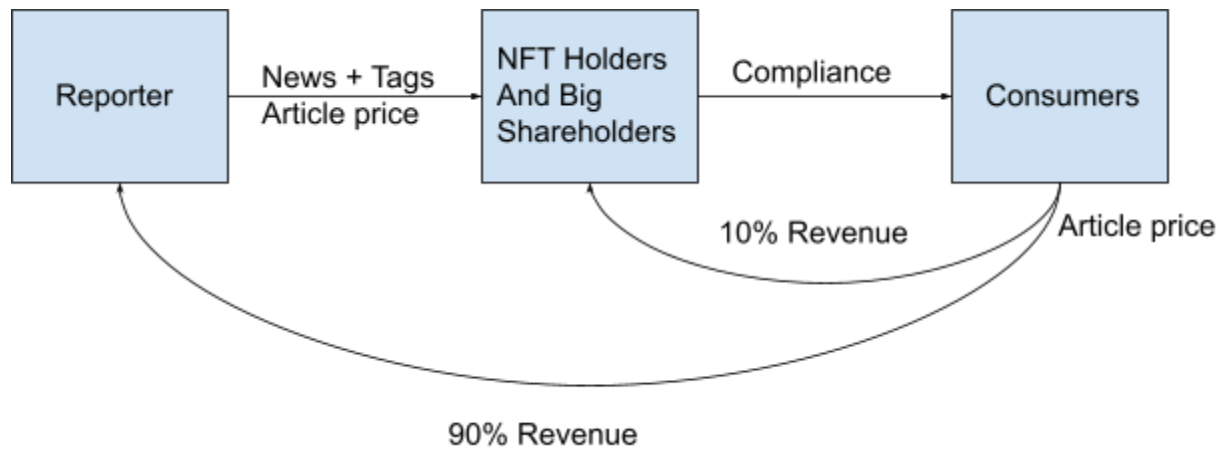
Sapien System Advertising Pipeline:
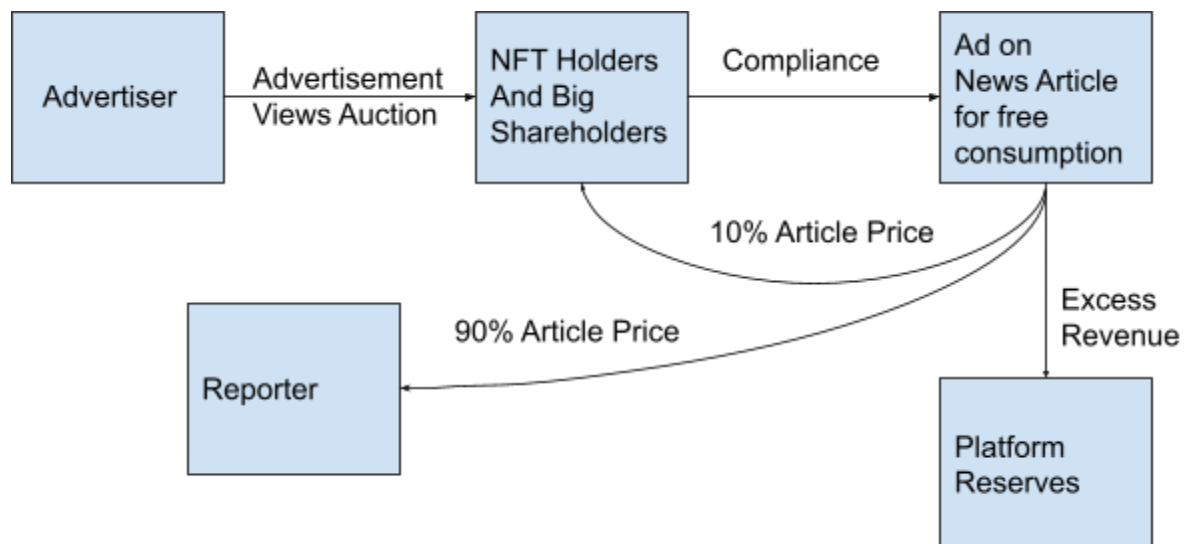
Sources of Revenue(Platform):

The platform delivers ownership and equity in a news article to its reporters and publishers. Where does the platform earn its revenue?

1. NFT Sales and Registration: In the ideal scenario, would not cause a lot of repeat business. These would be sold for $100, unless there is competition that leads to bidding.
2. Token Sales: This is a funding mechanism, and not viewed as a cause for sustainable repeat business.
   a. Token Penalties: Penalties in Publishing do give the platform the ability to earn from the sales of penalized tokens.

3. Excess Advertisement Spillover: This is a source of sustainable repeat business, and is only possible with mass adoption.
4. Report Storage Revenue: Storage is sold to reporters at a small markup, this would help reduce spam as well.

Platform Operating Costs:

The platform offsets its operating costs by passing the same to reporters, who have been offered the trade off between high equity in News Revenue and free publishing of stories.

Our Costs are:
1. Platform development - One time cost to set up the core infrastructure
2. Platform management and maintenance - Regular
3. Storage Cost - Sold to reporters with a markup
4. Marketing Cost - Regular

The platform must then outrun its platform maintenance and marketing costs, and make higher advertisement spillover, News Storage and Token Penalty earnings to increase the value captured sustainably.

This makes Sapien token holders aligned to increase consumer and reporter base, maintain legitimacy and maintain compliance.

Additional Opportunities:

While moderation in the News space is a cumbersome process, our community structure and our infrastructure provide a content moderation and delivery pipeline for monetizing consumption. This can be applied to the entertainment category of media, to reduce the efforts of moderators while increasing the platform's ability to sustainably outpace the costs of the platform.

Content production for News and Entertainment while different are also similar in many ways. The utility of information reduces exponentially over time and with the exposure of the information in question to the public. The costs of developing the content can be immediate or can be drawn out over time, for News the same is seen in investigative journalism.

Reporters or creators can add contributors to their product, to enable equitable splitting of the revenue they earn from the platform through consumption of their media. This also enables the ability to create smart contracts that enable funding of projects.

Conclusion:

By setting up a platform that needs to grow its user and creator base, and operate in a compliant manner, we design an entity that is aligned for ethical expression and growth.

By giving reporters more control over their earnings, reporters and content creators can quote a price for reading their news, within the limits approved by the token holders of the community. Reporters can also take 90% of their earnings home.

By giving publishers decentralized access, we give them the choice to go beyond their existing networks, and increase their choices for stories to broadcast. This empowers publishers to increase value delivered by evaluating the comparatively better reports.

By giving consumers the ability to micropay and consume we increase the choices that a consumer has. They do not need to reduce their choices by subscribing to a single entity or end up delivering value to social media agencies that end up cornering a higher share of the earnings and earn off platform members. The increased voice allows consumers to pick content that has higher utility for them.

Voters would have to ensure their actions increase credibility, as loss of credibility would penalize the market value of all holders. Therefore, by voting against and reducing exposure to(through penalties) all credibility harming and malicious activity is the best choice in a sufficiently decentralized system.