

TATA ELXSI

Customer Acquisition and Revenue Generation for OTT Industry

A Blockchain-based Approach for Effective Content Sharing

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ABSTRACT

Every content distributor owns the rights to premium content and wants viewers to consume them and acquire new customers through the means of subscription. This traditional subscription method is the primary means of customer acquisition. As consumers, they are forced to subscribe to multiple VOD platforms as most premium contents are not available on a single OTT platform.

We are proposing a unique strategy on how content can be appropriately consumed and monetized. This primarily works on the concept of Web3.0, Blockchain and NFT tokens. Web3.0, a distributed web technology, states that “Content, if really valuable, should find its way among consumers and should be directly consumed”. Blockchain mechanism ensures that the content rights and policy settings of the content are always intact and immutable. This solution carves out a win-win scenario for both the OTT platforms and the consumers.

The solution can be leveraged to multiple use cases. The following sections delve in detail into how Blockchain and NFTs can be leveraged to improve revenue for OTT players and reduce subscription anxiety for consumers.



INDUSTRY CONTEXT

Media and Entertainment industry is evolving rapidly, especially with the growth of online video and OTT. Staying at home has pushed consumers to OTT adoption faster as content is omnipresent as they have the freedom to view content when they want it to. A recent study¹ reveals that OTT video is said to grow at a compound rate of 29%. This is further boosted by OTT players having equipped themselves with analytical capabilities to deliver personalized content for subscriber stickiness. OTT players success counts on their ability to provide content that can deliver interest to the viewers and improves subscriber participation and platform interaction, thereby increasing the count of new subscribers and keeping the churn rate relatively low.

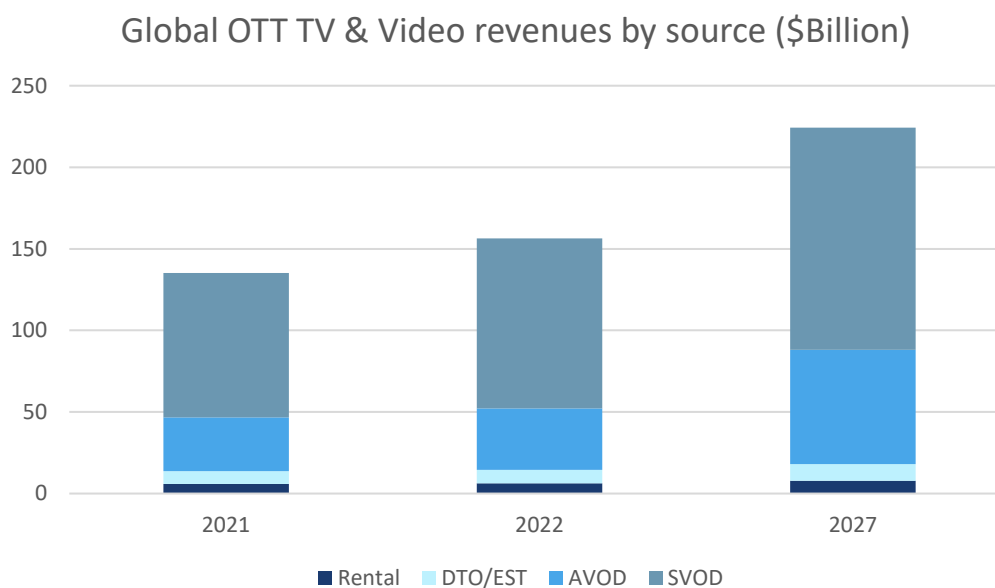


Fig 1. OTT market growth⁴

Unique, relevant, and interesting content will always be the de facto tool for Media players be it linear or digital. Great content with consistency attracts consumers and there is a high chance that consumers have loyalty to the OTT platform. This perceived value will help in marketing the content via sharing, reviews and word of mouth helping OTT players to increase their subscriber count. In fact, studies² suggests that 90% of customers believe in content recommendations that their friends/family provide.

With the advent of 5G, OTT market looks bright as it can accommodate large bandwidth while offering lower latency resulting in better viewing experiences. While the growth of OTT is a no-brainer, OTT players need to juggle between various parameters like stiff competition, the right content consumption models, ARPU, piracy, and much more to improve their subscriber count and increase revenue.

But even as the number of users on OTT platforms and active users runs into millions, keeping up with the current subscribers and acquiring new subscribers is a real challenge. Some leading players in the OTT space portray that it might not be the most profitable, reasons being:

- Content owning rights of the content is very expensive
- High subscription cost
- Content piracy
- Subscribers share their credentials with friends/peers. Unauthorized people consuming content for free
- Content monetized not done appropriately
- High content Ops cost leading to less ARPU



EXISTING CHALLENGES

Return on Investment

Each OTT platform has its own premium content and the costs to buy the content rights or create them is extremely high. As consumers, they are obliged to buy more than one subscription for the desired contents as premium contents are distributed across multiple OTT platforms and this causes subscription anxiety. Subscription-based on al carte or Pay-Per-View is not available today or is less prominent.

Monetization of content happens when the subscribers buy the subscription or through advertising. Most of the OTT platforms have started adopting a new model of content subscription model to increase their user base and increase revenues, FAST (Free Ad-Supported Streaming TV). This model allows users to view the contents of the platform for free with limited ads. But this model decreases user engagement and there is a higher chance of customer churn as they are forced to watch ads for viewing premium content.

Platforms that have their production houses are also struggling since the cost of creating content is much more expensive than the subscription revenues earned. Most of the OTT providers are running businesses at high operating costs due to the above-stated reasons.

Password Sharing (Sharing of credentials)

There is a growing trend where subscribers tend to share credentials with their families and friends, providing them access to premium content for free. OTT platforms use MAC-ID-based tracking to tackle the above issue. If any unauthorized user tries to log in, the subscriber will be charged extra for the usage. This tracking feature averts multiple logins which eventually makes OTT platforms lose their user base and decrease revenue.

Evaluating all these scenarios, OTT players are finding it hard to monetize each piece of content as well as improve subscriber count due to sharing of a single credential with multiple nonusers.

Tracking and Transparency

DRM (Digital Rights Management) is the primary technology used to track and authenticate subscribers. This technology though has brought a revolution in content distribution, but has certain limitations, i.e.,

1. DRM malfunctioning is due to flawed implementation. This leads to security breaches or affects the user experience.
2. DRM is not an apt solution for deepfake. Deepfake media contents are synthetic media contents wherein the content is edited, counterfeited.

Since most of the data is stored and managed by the operators, content providers or creators rely on and trust the operator for analytical data. There is no transparent system that can provide true and real time data to all the stake holders. Most of the data is stored in central databases and there are possibilities for the manipulation of the data.





Subscription Dilemma

As per findings from a leading research firm¹, 46% of users subscribe to two or more OTT services, a 130% increase since 2014. As consumers, they are obliged to buy more than one subscription for the desired content as premium content is distributed across multiple OTT platforms and this causes subscription anxiety. Subscription-based on a la carte or Pay-Per-View is not available today or is less prominent. They end up in a situation wherein the consumer is forced to subscribe to all or multiple OTT platforms to view the desired content. Subscribers are mere consumers of the content and there is no engagement with the platform, making them more vulnerable to discontinuing the subscription the moment the desired content is not available.

The above problem statements clearly highlight two glaring issues:

- Content piracy and the existing subscription system are not allowing OTT platforms to increase their user pool and revenue streams.
- Subscribers cannot watch a single piece of content and must subscribe to the OTT platform just to watch a particular premium content.

How does Blockchain solve the problem?

The content is uploaded onto the blockchain platform with each of them being associated with an Ethereum-based token. This token is associated with a respective smart contract. The smart contract holds the content media rights and content distribution rights policies as a piece of software which gets automatically executed every single time a content is viewed. This brings about transparency in the system and the content creator can also track:

- Number of views for a piece of content
- Number of times content has been shared
- The geo-locations where the content has more viewership
- The monetization scope of the content for targeted ads

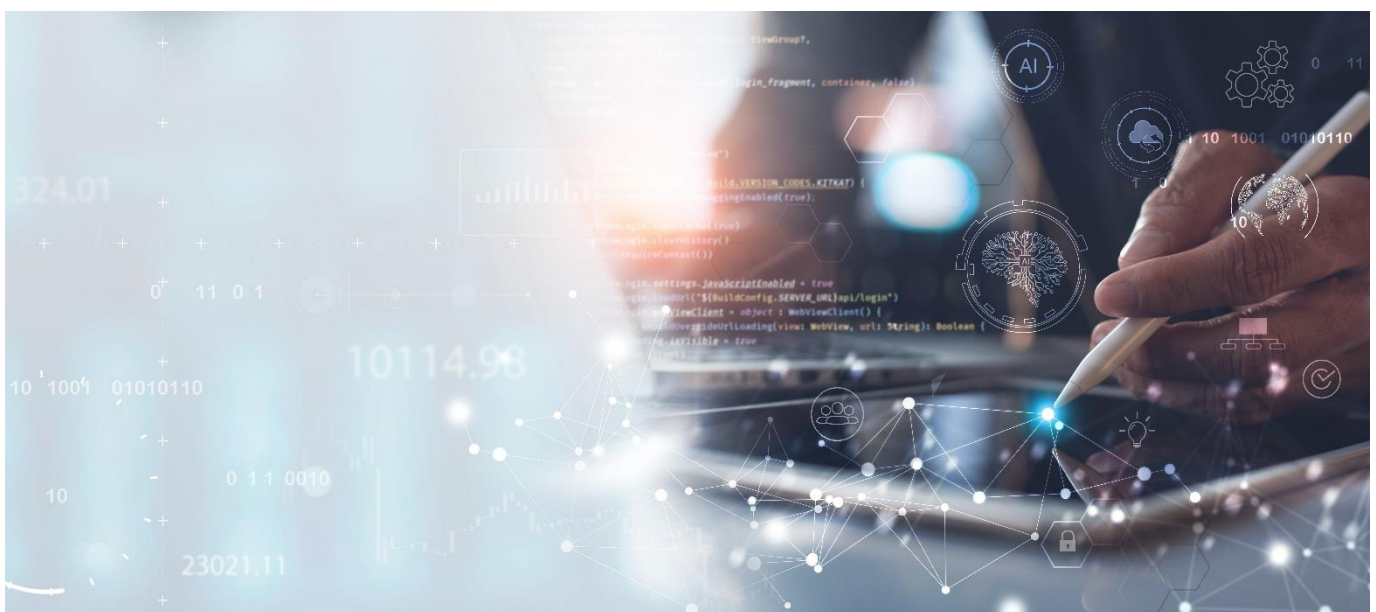


BLOCKCHAIN VS TRADITIONAL CDN FLOW

Traditional CDN flow highly depends upon the internet bandwidth as well as the server capabilities of the existing hyperscalers. There are no mechanisms available which are transparent in providing information regarding content distribution to monetization. DRM ensures that unauthorized users are not allowed to view content but there are no mechanisms to penalize the users for misusing the credentials. Also, for a content creator, the traditional CDN mechanism doesn't keep track of the content distribution— leading to lesser royalty.

Whereas blockchain brings about a whole dimension of automation, transparency, and trust with features such as:

- **Immutability:** Every transaction recorded on the blockchain is immutable. Every share or consumption of the content is recorded on the blockchain. This ensures that there is non-repudiation of data.
- **Distributed Ledger:** Every transaction is stored in all nodes of the network since blockchain uses a decentralized networking technology.
- **Faster Settlement:** Blockchain uses smart contracts in settling transactions and monetization, this system helps in both automating the content distributions as well as ensuring the validation of transactions.



Using blockchain as the backbone of the solution also provides with:

- Extensive tracking of the content
- Enhanced viewability on the content analytics
- Efficient way of settling payments, either for subscription or for sharing of content
- Easiness to incentivize users to share with the help of Ethereum-based tokens.
- The best way to handle and ensure there is no infringement of content rights and content distributions policies
- A single platform that will help in the creation of content for distribution.



Traditional CDN mechanism doesn't keep track of the content distribution leading to lesser royalty. Blockchain brings about a whole dimension of automation, transparency, and trust.

TATA ELXSI APPROACH

What if there is an innovative content sharing mechanism that can be easily integrated with any OTT platform which allows subscriber to [share/gift content to their peers and gets incentivized in return](#). Tata Elxsi have developed this innovative mechanism leveraging blockchain, Web3.0 and smart contracts. This unique approach allows for:

- **Gifting of content:** This feature allows the subscriber to gift the VOD content, make the payment for the content for their non-subscribed family/friends to view it. The subscribed users can choose the non-subscribers from their contact list. The TEFLIX (middleware) platform is responsible for invoking the content gift feature via smart contracts that are responsible for assigning access to the new user. TEFFLIX platform is responsible to mediate the payment and acknowledge the success of the payment by creating a transaction on the blockchain. For every gift of content, the non-subscribers receive an SMS or social media notification. The notification contains a downloadable link to a lightweight player. Once the non-subscriber downloads the lightweight from the notification, they will be allowed to register. Wallets are created for the non-subscriber and the content is assigned to the wallet and becomes available for consumption.
- **Sharing of content:** Sharing feature allows the subscriber to share the link of VOD content to non-subscribed users. The content-sharing flow is very similar to the gifting flow except that the receiver of the content must make the payment for the content they had been referred to.
- **Incentivizing the subscriber:** For every share or gift of content, the subscribed user is rewarded with an Ethereum-based token, which can be redeemed via subscriptions or integrated by other third-party services through vouchers. The TEFLIX platform invokes incentivization contracts. Incentivizing the subscriber for sharing the content is imperative because this keeps the subscribers engaged on the platform.

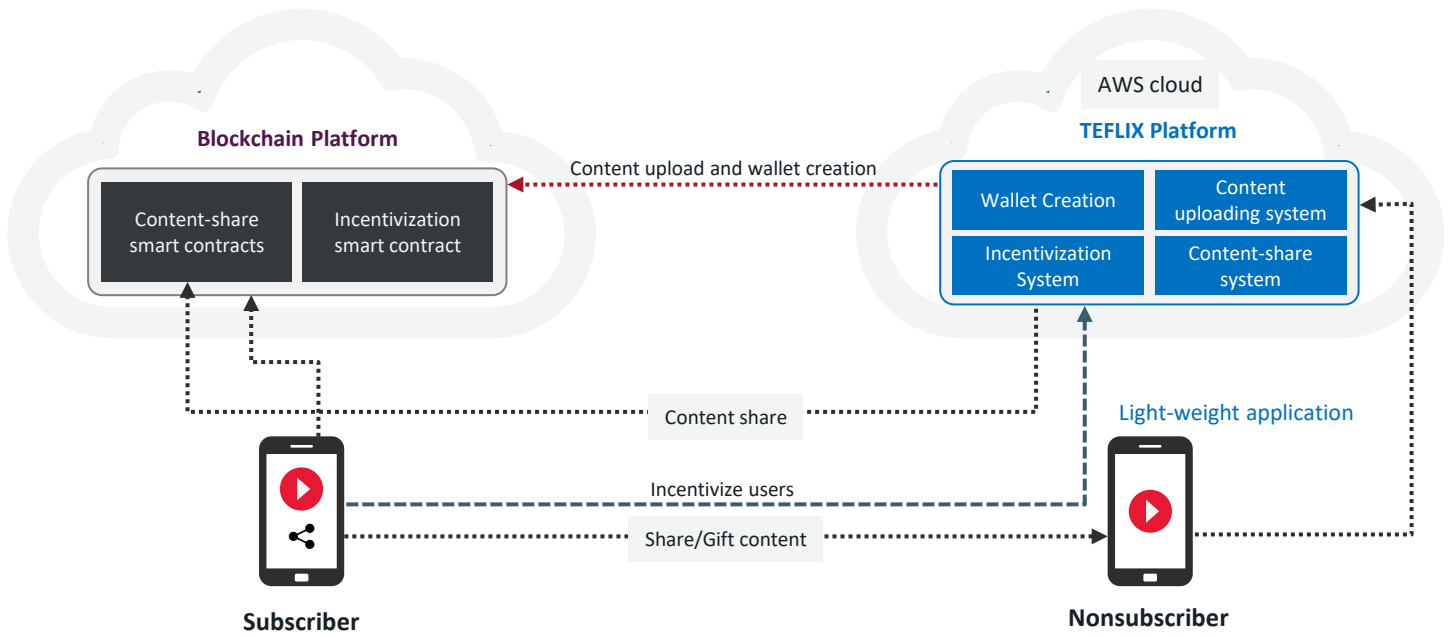


Fig 2: Content share/gift and incentivization mechanism with blockchain



INTEGRATION OF TEFLIX PLATFORM

TEFLIX platform has the capability to provide [Blockchain as a service \(BaaS\)](#) which is built and deployed on the cloud. The platform will be accessible to all OTT platforms through API (Application Program Interface) endpoints. There are two ways in which it can be integrated with the OTT platform to achieve the mechanism of sharing/gifting access to premium contents.

Option 1 - CDN and Blockchain

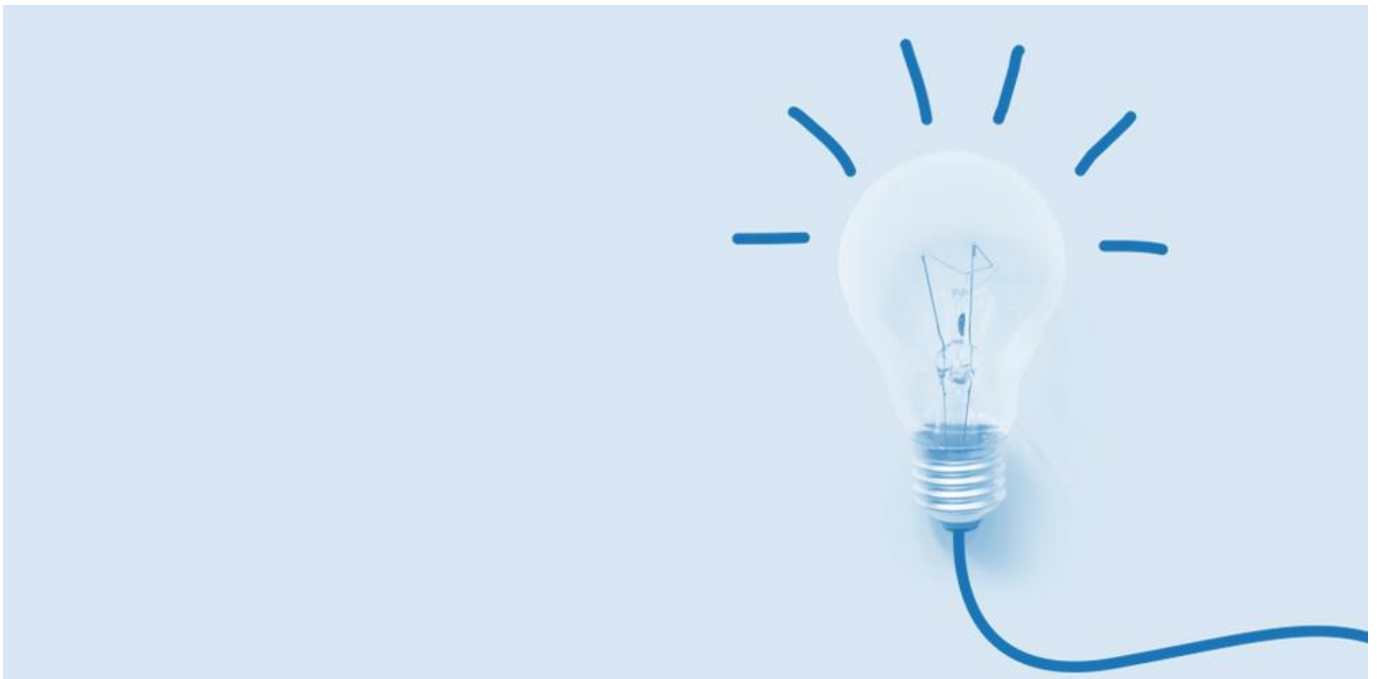
The OTT platform will have the ability to decide on the share/gift feature. These contents need to be uploaded onto the middleware platform and will be uploaded to the blockchain with a version of the hash maintained. Each content will be associated with an Ethereum token and a smart contract. As far as the OTT platform is concerned, there should be an integration of a share button with the middleware platform. This share action notifies the platform of the share/gift. A payment gateway integration enables the subscriber/non-subscriber to pay just for the content that is being referred. Once successful payment is done, the non-subscriber is authorized to view the content.

In the above mechanism, the OTT platform will have two different mechanisms of content distribution. One with the traditional subscription system, and the other through the means of recommendation done through the Blockchain platform.

Option 2 - Blockchain

Here the entire content distribution happens through the means of the blockchain platform. OTT platforms upload all their content to the blockchain platform. The TEFLIX platform associates Ethereum-based tokens and smart contracts to each of the contents. Subscription management is done through tokens and subscribers are recognized through the owners of the tokens. This mechanism will help content creators and distributors to track their content and bring about a more transparent system in place. The players must be integrated with the middleware through the mechanism of the share button. The sharing mechanism will be implemented indigenously since the content distribution is done through the Blockchain platform.

CONCLUSION



Blockchain based content sharing and monetization will change the way content is distributed and consumed. With its advantages content providers have greater power to track the usage of content and will provide a guaranteed mechanism for customer engagement.

Service Provider Benefits:

- **Create a micro-distribution channel for content:** This mechanism of sharing and gifting of content creates a whole new ecosystem for content consumption.
- **Increase and accelerate the monetization of content:** This mechanism of having to incentivize the subscribers for content sharing is organic and encourages users to share actively and engage leading to gamification.
- **Increase loyalty by converting subscribers to loyal customers:** Since customers are actively engaged and incentivized, customer loyalty is maintained to the OTT platform
- **Increase the reach to the potential user base:** This new strategy allows the OTT platform to increase customer reachability. This will allow the OTT platform to get new user data and monetize through targeted ads.

- **Benefit from advocacy of content from users and improve platform recognition by content approbation:** This strategy extensively brings out user engagement, only the right content to a specific user that is widely popular will be recommended and consumed. This will ensure that the OTT platforms must have good content.

Subscriber Benefits

- **Influence social circle by way of sharing:** Recommendation is an organic way to influence or push users, subscribers will now turn into social influencers and gain popularity within their social circles.
- **Incentivized for the behavior of sharing**
- **Increased engagement with the platform through gamification**

With stiff competition and tight regulatory environment, blockchain media sharing paves way to new revenue streams for content providers empowering them to innovate content distribution, improve customer loyalty and increase subscriber count.

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ABOUT TATA ELXSI

Tata Elxsi is a global design and technology services company. Tata Elxsi works with leading MSOs, content providers and studios to develop innovative services and applications that create subscriber stickiness and drive revenue growth.

This is backed by over 25 years of design and engineering experience and deep specialization in video and OTT engineering and service delivery, a global delivery presence, and offshore development centers in India. Our platforms like TEPlay, an all-in-one platform that relies on fully integrated technological building blocks, thus accelerating the launch of a next-generation OTT platform for content owners. It offers SaaS-based pre-integrated OTT Backend components (CMS, SMS, OTT Middleware, Usage Analytics, Content Discovery, UI Composer, Ad Tech Solutions, White labeled Apps) for faster deployment of OTT Services. TEPlay is backed with powerful analytics to improve engagement and make content more discoverable. Thus, TEPlay helps content owners deliver world-class video experience and maximizes monetization.

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