



Powering the New Era of Blockchain Enhanced Online Video

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Abstract

Online video is the fastest growing medium. It is set to account for 82% of all consumer Internet traffic by 2021¹ and the market is worth \$312 billion². Yet the online video business model is fundamentally challenged.

With the advent of online video platforms, both video creation and consumption are more accessible than ever before. This has led to a significant increase in content production and consumption as audiences shift online for digital entertainment. However, under current advertising models, companies like Facebook and Google stand out as the winners generating \$191.8 billion³ of net advertising revenue between them in 2017 by controlling the distribution of content and the sale of advertising.

Audiences have fast turned into a commodity. Their personal data is sold to corporations for more targeted advertising, while creators and publishers receive a percentage of revenue after the platform and intermediaries take a significant share of the advertising revenue. In recent years, content creators and online publishers have been very vocal on these issues, as the limited revenue they are generating means they are unable to re-invest into content and, therefore they struggle to maintain their channels.

With these monopolies controlling the majority of online content, they continue to turn the screw to increase margins, change algorithms that demonetize creators and decide what content is monetizable. Any competitor who sets out to challenge this status quo and gains audience attention is quickly acquired and controlled, threatening future consumer options online.

The mass adoption of AdBlock technology demonstrates the viewers frustration with the current model. Creators and publishers with strong, loyal audiences are exploring new platforms to sell subscriptions for their content, where users are happy to pay for an ad free experience, which is often an expensive route for all.

Without disruptive change, we are witnessing a race to the bottom caused by conflicting priorities between Creators, Advertisers and their current platforms.

¹https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-4813

⁻²https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-4813 60.html# Toc484813971

 $^{3} \underline{\text{https://www.recode.net/2017/7/24/16020330/google-digital-mobile-ad-revenue-world-leader-facebook-growth}$

Verasity sets to change all this. It is next generation video sharing platform is designed to liberate creators and benefit the viewer experience.

Using blockchain technology, the platform facilitates direct and transparent value exchange between video viewers and content publishers or creators. As a Foundation, revenues are retained within the economy and for platform operating costs. Verasity puts the power back into the hands of the users and content providers, creating a better ecosystem for all.

The Verasity protocol aims to power the future of digital entertainment. It will be adopted by Content Publishers, Creators and Advertisers as a replacement for traditional content monetization channels. Verasity will challenge the hegemony of the tech giants who are rapidly becoming digital cartels.

Verasity is one of the few completely compliant SICOP token offerings. The certification methodology can be followed here: http://sicop.tokeny.com/verasity-tokeny-u180301



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Definitions

Creator: An individual who creates or owns video content to share on their own online video channel to generate both views and revenue from their audience. In this document Creator and Publisher are used interchangeably

CDN: Content Distribution Network, or a distributed network of servers that consumers connect to in order to receive video. The servers are normally positioned close to the end user and are normally deployed at scale to provide higher quality video experiences

Digital Wallets: Desktop Application wallet and Web wallet with an API into Player, both used to hold VERA

Economy: Verasity ecosystem in which Vera, the Verasity token, is utilized for transactions

Management: Core team listed in this White paper

OVP: Online Video Platform including uploader, player and CDN network

Publisher: A company that distributes video content across multiple channels and mediums to maximise both views and revenue from their audience. Typically works with multiple creators who contribute to their content library

Platform: The combined suite of technology and products that power the Verasity Video Sharing Ecosystem and Economy

Proof of View (PoV™): Proof of View implementation on the Blockchain and patent pending as further described in the "Proof of View" section below

Spark Marketplace: A Marketplace for participants in the Verasity ecosystem to buy and sell VeraSparks with VERA

Verasity Foundation: Verasity Foundation Company Limited, a Cayman Islands foundation company registered under the Cayman Islands Foundation Companies Law, 2017, which has been incorporated to support the Verasity Economy and Platform as per this white paper

VeraPlayer: Video Player, Uploader, CDN and components that make up the online video platform, a technology licensed by Verasity and to be made available to the Verasity community and economy. This technology is already operating and available for implementation

VERA: A cryptographically secured digital utility token which will be created and used within the Verasity Video Sharing Ecosystem and Economy and verified on the Verasity Blockchain

Verasity Blockchain: The Blockchain network that uses Delegated Proof of Stake consensus. It will generate VERA and confirm transactions for the Verasity Video Sharing Ecosystem and Economy as further described in the "Blockchain" section below

VeraPay: Ecosystem infrastructure to buy and sell VERA, as well as facilitate commercial transactions in the system between Consumers, Advertisers and Content Creators/Publishers

Verasity: VeraTech Ltd, a company incorporated under the laws of Cyprus, which will operate the Platform

VeraSpark: A Smart Contract that represents a percentage ownership in the channel. It also entitles the VeraSpark owner to a portion of the VERA collected on the channel while they hold the VeraSpark

Verafier: An elected representative within the Verasity Delegated Proof of Stake system who witnesses and creates new blocks on the Blockchain

Verasity Site: The Viewer and creator destination to use Verasity's platform

VeraFund: A way for users to easily buy and sell VERA

Introduction

Verasity is developing a next-generation video sharing platform. This platform will empower Creators and improve the experience of watching video online.

There are many existing challenges identified with the online video space today. Verasity's team of media, technology and blockchain experts are building a new model where Creators and Viewers transact directly on the Blockchain, removing the need for intermediaries. The Verasity Player and online video platform is fully functional and can be seen at: verasity.io This includes the Verasity Player Wallet prototype.

The "VERA" token is a new medium of exchange and reward for video creation, sharing and viewing across the Verasity community. Anyone watching videos can earn VERA currency. If they choose to watch adverts or share the videos with their network, they will then receive further rewards in VERA. The platform gives Creators and Publishers a variety of monetization solutions to choose from. Verasity's mission is to help them generate more value from their content. All transactions of the VERA token will be tracked and stored on the Blockchain utilising Delegated Proof of Stake (DPoS).

In a goal to bring Creators and Viewers together to support the creation of great video content. "Spark" is a brand new take on a Marketplace where Viewers can fund Content Creators using VERA. Creators can opt to sell a "stake" (VeraSparks) in their channel to finance production of new high quality content. Then those who have supported them can share in their success.

To ensure transparency and integrity for the community, Verasity are developing a proprietary "Proof of View" technology. Every video view will be securely tracked and stored on the Blockchain. This provides the security, flexibility and scale to support a flourishing new environment for Content Publishers, Advertisers and Viewers.

The project vision is for the Verasity Protocol to also be adopted across the wider web and for VERA to become the cryptocurrency to power the future of online video.

Key Takeaways

Verasity fundamentally changes the online video ecosystem and economy in the following ways:

- 1. Verasity has developed a patent pending "Proof of View" system, enabled through blockchain technology, to provided accurate, secure and auditable audience metrics.
 - a. Without credible audience metrics, content cannot be accurately valued.
- 2. Verasity disrupts the commercial dynamic of the traditional media ecosystem by making Viewers the center of all content transactions, and making the transaction direct between the Viewer and other participants in the ecosystem such as Content Creators and Advertisers.
- 3. Due to these direct relationships in the Verasity ecosystem, the success of content is determined by the organic consumption/valuation of the content by the viewer community, rather than being influenced by the monetization strategy of a third party.
- 4. Verasity encapsulates the whole video sharing ecosystem and economy, for all participants. This results in all value exchange being retained within the economy and community.
 - a. In legacy video sharing platforms, value bleeds out to the platform shareholders, third parties and intermediaries and therefore devalues the community as a whole.
- 5. Through the Spark Marketplace, all participants within the economy can provide funding to content channels in exchange for a portion of the channels future revenue. As a result, both active participants within the economy and Speculators (outside of the economy) have additional ways to grow the ecosystem and benefit from its growth.

Problems in the Current Video Sharing Market

The estimated total addressable market for online video is \$312 billion. Two of the largest video platforms generate over 1.1 billion hours of video watched per day⁴⁵, yet fail to effectively balance the conflicting interests between different stakeholders including Viewers, Creators, Advertisers and their own Shareholders.

Facebook, Instagram and YouTube force users to watch ads to generate revenues for the platforms. Users have concerns regarding the use of their personal data.

Platform businesses need to generate revenue and profits to pay for the technical infrastructure, operating expenses, the many advertiser intermediaries, and a share to the Creator. The share paid to the creator has been reported to be as low as \$0.30 on the dollar.⁶

All this data is centrally stored so there is no way a Creator or Publisher can actually prove what their share was and they often need to wait 60 days for before they receive their payment. Platforms can often change policy, or tweak an algorithm, which can result in loss of revenues for the creator, who has no voice to complain.

In a race to replace lost revenues, Creators create a higher volume of content. This creates a total oversupply of content commonly known as "content shock 7". This means there are more videos on the platform than is humanly possible to watch, and there are insufficient ad revenues to satisfy all Creators. Now the platforms have an abundance of low quality content which they need to pay to store and host, increasing operating costs.

While this approach does produce a massive library of content, only Creators who generate extremely large audiences generate high levels of revenue. High quality but niche content, which can be extremely valuable to its audience, is significantly disadvantaged as income is largely dependent on maximizing views. Creators and Publishers have become commodity content suppliers amongst vast undifferentiated content in a social media news feed. As a result, Content Creators and Publishers are increasingly being pressured to pay for viewer attention, thereby further increasing the control the largest platforms have within digital media.

Some creators may try to game the platform by using bots to create fake views and increase through the rankings, creating an unfair marketplace.

Advertisers only want to advertise against brand safe content and real users. As their revenues are key to the platform, they call the shots and enforce policy changes that negatively affect the creators. With an infestation of bots and fake views, Advertisers complain and reduce their price. Both net result in lower share to the creator.

Creators may have had enough and migrate their content to transaction based platforms. However payments on traditional websites are not currently designed for microtransactions, they are clunky and inflexible.

⁴ https://www.recode.net/2016/1/27/11589140/facebook-says-video-is-huge-100-million-hours-per-day-huge

https://www.youtube.com/yt/about/press/

 $^{{}^{6}\}underline{\text{https://mediatel.co.uk/newsline/2017/03/28/the-guardian-is-preparing-to-sue-adtech-firm-rubicon-project/}}$

https://www.riverbedmarketing.com/what-is-content-shock-and-what-it-means-for-your-business/

Creators rely on a solid fan base and must trust that they get their fair share after the expensive fees they pay to each platform. These complex paywalls also act as a barrier to entry stifling Creators from growing their fanbase. Creators are unable to quit their day job and do not have enough time to make great content as they struggle to raise funding. They have a cash flow problem because the value is being locked up in their content.

Publishers or Creators looking to use an enterprise video solution to host on their own site will have to invest massive upfront fees and cover expensive bandwidth, storage and player fees. This is often enough to prevent large publishers wanting to push video, as it costs more to serve than the income made on ad revenue.

The top three platforms form a quasi-monopoly⁸ controlling over half of all digital ad revenue. All three have recently entered content production and they are centrally investing a fortune. This competes directly with Creators and Publishers. If any new platform starts building large audiences, they are quickly acquired. This seriously affects the future of consumer choice.

And here lies the problem. Centralized platforms start off with the best intention to support the user base. Then over time the user base reaches mass scale and the platform serves its shareholders over its community.⁹



⁸ http://fortune.com/2017/07/28/google-facebook-digital-advertising/

⁹ https://medium.com/@cdixon/why-decentralization-matters-5e3f79f7638e

Revolutionising Online Video Sharing

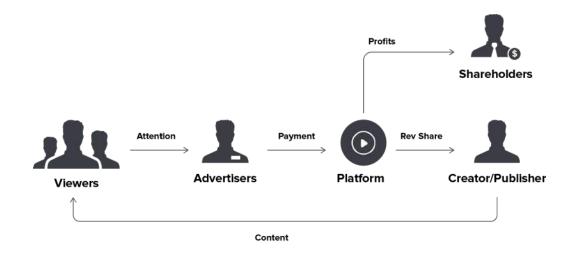
Verasity is designed to enable the online video economy and ecosystem, as a whole, by restructuring the relationships between Content Creators, Advertisers and Consumers. This is contrary to existing video sharing platforms that try to facilitate a legacy ecosystem with many layers of middlemen and vendors between the ecosystem participants.

Verasity will fundamentally change the existing dynamic of how content is valued to be driven directly by consumer engagement. In legacy advertising driven media economies, the value is assigned to audience demographic and size, not the content itself. This abstraction layer skews the content value to high volume engagements benefiting the Advertiser, rather than high quality engagements benefiting the Consumer and Content Creator.

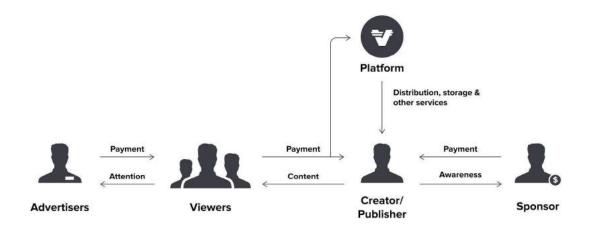
Verasity adheres to the following fundamental principles:

- 1. A platform providing trust, transparency and integrity to the video sharing community.
- 2. Viewers should be able to purchase and view high-quality video across multiple devices and operating systems anywhere on the globe without buffering, latency or playback issues.
- 3. Viewers should have the opportunity to sell their time-based attention to the highest bidder but not be required to do so in order to engage with content.
- 4. Viewers should be able to decide if they wish to receive targeted advertising and if their demographic information can be used for targeting.
- 5. Creators should be able to easily upload, share, monetize and retain control of the distribution of their content.
- The platform should optimize for high quality consumer experiences, while minimizing the cost of distribution thereby creating more margin for Content Creators, and more affordable media for Consumers.
- 7. There should be multiple monetization methods to best suit each perspective participant within the ecosystem where payments are processed and received in near real time.
- 8. All value exchange should stay within the economy and ecosystem supporting both growth and innovation as well as ensuring that all participants are fairly compensated for their contributions.

Value Flow in Video Platforms Today



Verasity Value Flow



Sponsor relationships will be included within the Verasity Economy rather than managing them externally as is done traditionally. Further details can be found in the Sponsors section of the White Paper.

Product and Technology

The technology behind Verasity features an end-to-end suite of products and systems that provide Content Creators, Advertisers and Consumers the tools needed to access, engage and thrive within the economy and ecosystem.

- Video Hosting and Distribution Technology: already developed
 - Next generation video player
 - White label options
 - Distributed delivery infrastructure partnerships for high quality and scale
- Blockchain Infrastructure:
 - VeraPay: to handle microtransactions
 - Proof of View: to ensure the integrity of engagement metrics
 - Smart Contracts: to create efficient and low overhead commercial relationships between participants in the Verasity ecosystem
- Channel Venture Backing: to develop
 - VeraSpark: to develop
 - A mechanism for Creators and Publishers to accelerate growth in the development of their channel by offering a part ownership in the channel to other participants within the Verasity ecosystem
 - A VeraSpark is a Smart Contract that represents a percentage ownership in the channel. It also entitles the VeraSpark owner to a portion of the VERA collected on the channel while they hold the VeraSpark
 - Spark Market: to develop
 - A Marketplace for participants in the Verasity ecosystem to buy and sell VeraSparks with VERA.
- Content Management, Discovery and Features: already developed
 - Content management and analytics
 - Recommendation surfacing engine
 - Content moderation tools

Video Hosting and Distribution Technology

Next Generation Video Player

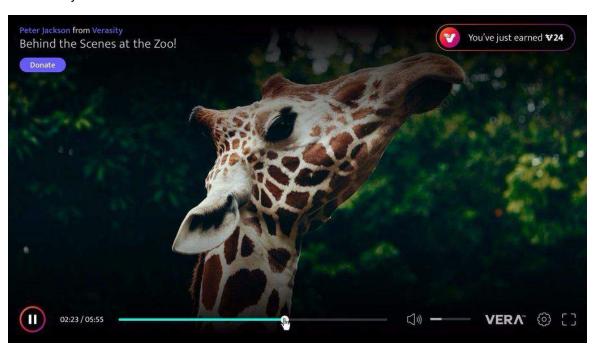
Verasity's custom-built video player is optimized for providing high quality video experiences, at scale, as economically as possible. The VeraPlayer utilizes several novel technologies for enabling the seamless commercial ecosystem, combined with the latest Internet protocol performance standards like QUIC (Quick UDP Internet Connections). This is an innovative use of secure Transport Layer Security(TLS) and User Datagram Protocol (UDP) reducing buffering, and increasing video resolution for Viewers.

Viewers can access content from a variety of modern browsers without having to install any additional plug-ins or player software. The video player technology has already been proven to work at scale, powering over 8 PetaBytes of video traffic per month. VeraPlayer has been in continuous development for 3 years.

Specifications include:

- HTML5 player
- Vast 3 and VPAID support
- Vera Wallet integrated access and interface
- Can run with or without Google IMA SDK
- Lightweight and adaptive for mobile screens
- Fully configurable, customizable and API enabled
- 1080p / 60 frames-per-second Full HD ready

Interface of VeraPlayer



CDN and Dedicated Server Infrastructure

Verasity utilizes a custom built online video platform which partners with Akamai, a leading global CDN network.

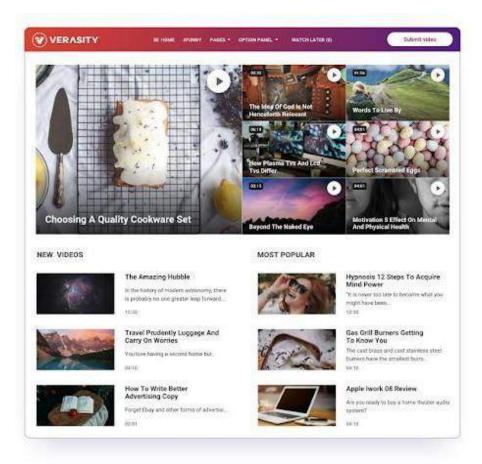
"Verasity is a white label version of an online video platform utilizing Akamai's CDN network as well as key technologies of Akamai. As an Akamai network partner the white label solution utilizes Akamai's "media acceleration efficiency (MAE)" solution which has scaled on this white label online video platform to over 8PB data per month." - Joshua Frost Niven, Akamai

Using a CDN guarantees high playback quality, with low buffering, on a global scale. It also enables all content to be securely hosted, stored and managed on Verasity servers. Reliable video delivery using a scaled and trusted network such as Akamai guarantees superior user playback experience which is critical for mass adoption. If Viewers experience delayed video starts, low quality streams and long buffering times, they will not adopt a new platform, nor will they happily pay for content, meaning that platform could never scale.

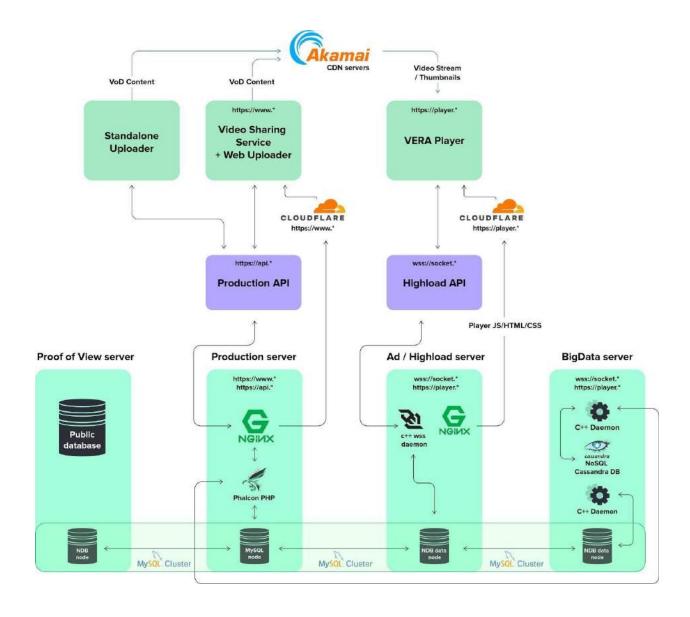
Although Verasity partners with Akamai, Verasity does not rely on Akamai technology and could switch CDN vendors on short notice.

Platform UI

While the VeraPlayer will be able to be embedded across any domain, there will be a main destination for Viewers and Creators to interact. Viewers will be able to find, watch and engage with content.



Video Platform Has Scaled to Over 8PB/Mo



Blockchain Enabled Components

VeraPay

The VeraPay component will provide the ability for users to buy VERA easily. This is by using a third party integration to manage all the necessary transaction and security protocols. VeraPay will support the VERA microtransactions between Viewers, Publishers, Creators, Advertisers and Sponsors. This ensures users

have a seamless experience to join and utilize the ecosystem. Atomic swaps between other crypto tokens will also be explored for ease of decentralized transactions between cryptocurrencies and VERA.

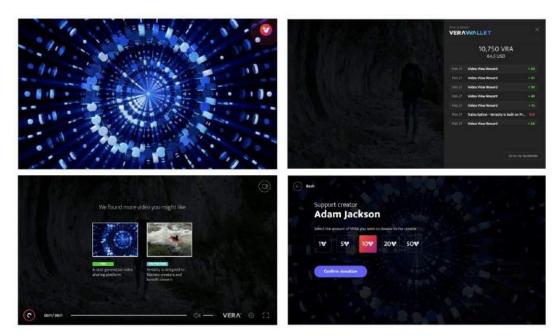
Proof of View (PoV™)

Verasity has a patent pending system to securely verify audience metrics (views) in a way that is publicly transparent and tamper proof. This system ensures the integrity of the all elements of the Verasity economy which relies upon audience metrics.

Wallet Solutions

Management of Verasity intends to launch a desktop wallet application to safely store users' VERA. The desktop wallet application will also allow users to act as Verafiers to verify transactions and participate in the creation of new blocks.

The Web wallet offers users easy access to their VERA on the platform. The wallet is built into the player, providing users access to their balance in realtime, and enables the VeraPay protocol to seamlessly send and receive VERA within the ecosystem. Users can transfer funds between each wallet.



Verafiers

Within the Verasity Blockchain, users can be elected as representatives to witness / verify the transactions in the Blockchain which is a core component of the stability, and legitimacy of the underlying platform. Verafiers are compensated in VERA for performing this role in the ecosystem.

Smart Contracts

Verasity uses Smart Contracts to facilitate all types of transactions in the ecosystem. Smart Contracts are digital constructs in the Blockchain that facilitate, verify, and enforce an agreement. They make transactions between participants instant without the need for third parties.

Channel Venture Backing: VeraSpark / Spark Marketplace

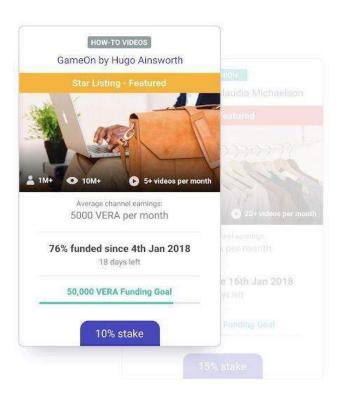
The Verasity platform will provide a mechanism for Creators and Publishers to both build brand loyalty and to accelerate growth in the development of their channel by offering a revenue share in the channel to other participants within the Verasity ecosystem via VeraSparks.

VeraSparks are a Smart Contract, purchased with VERA, which entitles the owner to a portion of the VERA collected on the channel while they hold the VeraSpark.

The Spark Marketplace is an internal marketplace for VeraSpark owners to buy and sell VeraSparks with other ecosystem participants. Participants will be able to trade VeraSparks above or below the market value.

To help guide users who participate in the Spark Marketplace, Verasity will provide a "recommended market value" of a particular channels VeraSpark, calculated by a Verasity algorithm that takes into account verified Proof of View $(PoV)^{\text{TM}}$ of the content, the revenue stream of the channel, the recommendation engine and other key parameters.

Through the Spark Marketplace, Verasity provides a new mechanism for VERA Speculators to participate directly in the Verasity economy. Users who purchase VeraSparks will receive a share of channel earnings and may see an appreciation in the value of the VeraSparks they own.



Content Management, Discovery and Features

Content Management System (CMS)

The Verasity CMS will be easy to use for Creators to publish and manage their videos. This includes both an online and desktop based upload and management suite that enables Creators of all sizes to effectively run their content libraries.

With multiple monetization options, the Verasity platform enables multiple types of content to thrive, from niche technical videos through to feature films. The Verasity CMS was designed to cater to the individual. We recognize that every Viewer, Content Creator, and audience is different and therefore bring together multiple monetization methods which allows Creators to monetize their content in a way that makes sense for their audience.

Surfacing and Promoting Content

Surfacing content is a critical component of maintaining a healthy video economy and ecosystem. Viewers need to be able to quickly and easily find content they will enjoy and engage with. Creators need their content surfaced to grow their audience and channel.

Verasity benefits from additional data points compared to current platforms when evaluating how to rank content, specifically additional data on how Viewers value the content through transaction data. Alongside the data on user valuation of content, traditional metrics such as views over time, keywords, likes/dislikes, comments and machine learning in content recommendation will be used to optimally surface content within searches and directories. Combined with Verasity's Proof of View system, all participants within the ecosystem can independently audit and verify the legitimacy of many of the data points used in content promotion. This ensures credibility and accountability of all participants within the system and minimizes risk of manipulation of content recommendation / surfacing.

In addition to organic surfacing of content, Verasity will provide Creators and Publishers with a direct interface to promote their content on the platform for VERA. These promotional spots will be an optional feature to enable Content Creators to market themselves on the platform. To maintain a high quality user experience, only a limited number of promoted videos will appear in any search, directory or recommendation system at a time.

Content Moderation

Versasity is fundamentally changing the dynamic of the relationships in the content ecosystem. In traditional media ecosystems the Advertisers have a heavy hand in the content moderation policy. That is not the case in the Verasity ecosystem since advertising is directly associated with the Viewer's time, and disassociated with the Viewers' content. This removes many of the issues with traditional models where content or advertising appears to be "censored" due to a complex moderation policy. Verasity is then able to focus on the consumer experience first, getting the right content to the right Consumer.

Content Moderation is a very sensitive topic for any video ecosystem, and requires a balance of consumer protection, legal, and economic consideration. When evaluating the degree of moderation and the rules regarding what content can be uploaded to the platform, Verasity's goal is to protect the economy, ecosystem

and community as a whole while minimising the amount of moderation.

Moderation throughout the ecosystem will be initially undertaken by a team of Verasity administrators, with users able to report issues with content. Over time, we will gradually involve the community in the moderation process to effectively scale the platform, maintain an impartial perspective, and allow the economy and ecosystem to become more self-sufficient. This will include rewards for users who accurately report content and the creation of User Moderators in the future.

Verasity content moderation rules will include:

- 1. Must be legal in the geographies it can be viewed in
- 2. Cannot encourage or incite violence or hate speech
- 3. Cannot contain or encourage harassment of specific individuals or groups
- 4. Cannot impersonate someone in a misleading or deceptive manner
- 5. Cannot contain personal and confidential information
- 6. Content that is only suitable for adult viewers must be flagged as such
- 7. Must comply with copyright and other content sharing laws

Please note this list may be updated from time to time to ensure Verasity adheres to new legislation

Additional Features

Analytics Tools

Advanced tools enable Content Creators to see how well their content is performing and which are the best models to maximise income. The platform will provide detailed analytics on content engagement, performance and optimization while still maintaining the privacy of Viewers.

Social Media Attribution Tools

Easily share content across social media platforms to promote videos and attribute VERA back to the promoter.

Content Recommendation Engine

Management intends to implement a Content Recommendation Engine utilizing machine learning technology to analyze Viewers' interests and matching recommendations from the content library, to be delivered within the player interface.

Apps and Devices

The Verasity Platform will work seamlessly in both desktop and mobile browsers. Plus development will publish apps for multiple popular devices including iOS, Android, PlayStation, Roku and other leading OTT platforms at a future date to provide the best experience across multiple devices.

Blockchain Development

Verasity Blockchain Technology

Verasity utilizes blockchain technology to enable a transparent, accountable and effective solution to many of the challenges within the video sharing economy. The key elements to Verasity's Blockchain based technologies are:

- 1. Verasity High Performance Blockchain
- 2. VERA Transactions
- 3. Proof of View
- 4. DPoS

Blockchain scalability and performance is the number one priority for a commercial system like Verasity. In order to achieve the performance levels required for such a large microtransaction based ecosystem, the Verasity team needed to achieve advances in performance that were order of magnitudes higher than what is available from most currently available blockchain solutions.

In order to maintain a stable and scalable solution for such a large potential market, reliance on a third party blockchain would create a major point of failure within the Verasity economy.

Creating the Verasity Blockchain yields significant advantages:

- Gives Verasity the ability to quickly add new transaction types and Smart Contracts to the blockchain
- Transaction fees get contributed directly back into the Verasity economy
- All enhancement to the Blockchain can be managed for ecosystem compatibility
- Ensures that the Verasity ecosystem does not suffer from congestion of another ecosystem using the same blockchain framework.
- Verasity can minimize risks associated from potential legal, economic, or geo-political use of a public blockchain project.

Verasity's Blockchain will be based on the Graphene DPoS Blockchain. Graphene, is an Open Source C++ Blockchain framework originally developed as the foundation of Bitshares, a decentralized cryptocurrency exchange marketplace. It is modular in fashion, making it adaptable for different uses. It is capable of maintaining a transaction confirmation time of no more than 3 seconds and can scale to over 100,000 transactions per second. As the Verasity network scales, this volume of transactions will support an accurate record of each transaction within the economy both during average and peak volumes. To put this in perspective, major credit card providers process around 2000 transactions every second.

By basing the Verasity Blockchain on Graphene, it is possible to handle a much higher volume of transactions than other platforms. This will be essential to scale the economy and platform while still minimizing the amount of data required for each transaction.

The Verasity Blockchain will optimize resource usage so that speed and volume of transactions can be maintained as the economy scales. For example, where possible the software will store data in RAM. This will minimise the number of time consuming database queries required and help when scaling to handle up to, and beyond, hundreds of thousands of transactions per second.

Finally, the Graphene framework avoids using hashes, which are time consuming to manipulate and require a lot of memory. Instead of hashes, globally assigned unique IDs are used that do not conflict with one another to refer to an account, permission or balance. This approach significantly decreases the amount of CPU cycles and memory required and therefore further optimizes resource usage.

Please note: the ERC20 VERA Tokens created and distributed on the Ethereum Network are for the purpose of a Token Sale and will fund the development and adoption of the Verasity platform. Once the platform is live, these tokens will be replaced by VERA running on the Verasity Blockchain on a 1:1 basis.

Proof-of-View (PoV™) on the Blockchain

Media ecosystems of today are plagued by suspect and often fake¹⁰ content view statistics. These statistics are used to value the content or advertising, thus are being manipulated to generate fraudulent revenue.

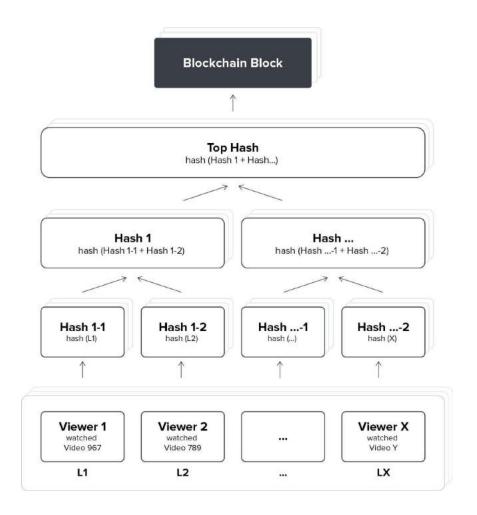
PoV™ is a system designed to securely verify content consumption on the ecosystem, in a way that is publicly transparent and tamper proof. It is utilized within the Verasity economy to ensure the integrity of audience metrics and therefore the integrity of the ecosystem as a whole. Examples where such integrity of audience metrics are essential include the Spark Marketplace where audience metrics influences the channel value, and content surfacing where inflated audience metrics would manipulate content ranking thereby eroding trust in the system.

To ensure an accurate and transparent PoV[™], Verasity will implement publicly auditable logs. These logs will contain all views and content recommendations along with anonymized viewer information. The information will all be General Data Protection Regulation (GDPR), Payment Card Industry (PCI DSS), and ePrivacy compliant.

A Merkle Hash Tree guarantees that the database has never been altered. In the hash tree, each view's event data is hashed before being combined with other hashes until a final top hash is reached. Each top hash represents all the data stored in the specific chunk of the database.

The database itself is split into chunks. A new chunk is created each time a new block is created in the Blockchain. The top hash of the current chunk is added to each new block in the Blockchain. See the diagram below:

¹⁰ http://videocontestnews.com/2013/01/25/how-to-spot-fake-youtube-views/



As this data is stored in a decentralized manner, third parties are able to prove that each top hash added to the Blockchain is accurate and unchanged. This allows any third party to verify that the logs added within each new block on the Blockchain have not been tampered with, changed, branched or forked.

On 7 February 2018, a United States provisional patent application was filed for a system and method for Proof of View via Blockchain and providing Channel Stake Marketplaces (Application Number 62627285). Following the Token Sale, such patent application will be assigned to the Verasity Foundation, who will further develop additional intellectual property in connection with the Platform.

Verasity technology will be offered under the Creative Commons Attribution-NonCommercial-ShareAlike

4.1 International Public License (defined at https://creativecommons.org/licenses/by-nc-sa/4.0/legalcode as the license stands as of February 16, 2018, see details below).

How PoV™ Prevents Fake Views

- 1. Only views from signed in users are counted.
 - a. Within a video sharing platform, views are a type of transaction. To provide accountability and therefore transparency for transactions, a unique identifier needs to be allocated to all parties involved. When viewers create an account, they are assigned an anonymous ID that then marks the video views generated by that user.

- b. Viewers who are not signed in can still view free videos, but these views are not confirmed through PoV™.
- 2. A single user cannot make multiple views at the same time.
 - a. The majority of viewers are only able to truly watch one video at a time whereas some bad actors may try to use multiple browsers, watching in parallel, to inflate view counts.
 - b. PoV will not count views when more than one video is running in parallel from a single user.

3. Confirmed streaming.

- a. For content to be viewed, the content file needs to be streamed to the browser. Through Verasity's PoV™ technology, while a video is being viewed the player will randomly be required to provide information about the current frame of the video being viewed.
- b. This ensures the content has been streamed and avoid bots that try to watch without actually streaming content.

4. Player must be viewable.

- a. Through technology built into VeraPlayer, checks are made during a video view to ensure the player is visible within the browser window and not scrolled out of view, hidden, shown in background tab etc.
- b. If a view is generated when the VeraPlayer is not viewable, the view will not be verified.
- 5. Suspicious activity requires manual check.
 - a. While the above points outline some of the ways PoV™ technology will verify and guarantee authentic views, the system will continually monitor for suspicious or unusual viewer behaviour even if all the above checks are passed.
 - b. An example of suspicious behavior would be a video being viewed by one user repeatedly in a set period of time. While this is not necessarily a fake / invalid view, before additional views were recorded as verified, a manual input would be required by the viewer to ensure they were still watching. This manual input would be designed to avoid automatic / programmed responses from being able to pass the check (e.g. reCAPTCHA).
 - c. As our PoV™ technology gains additional data through use, any common or high frequency suspicious activities will be used to create additional, automated features in PoV™ to verify.
- 6. PoV[™] data is publicly auditable and transparent.
 - a. Verasity's technology will use advanced methods to ensure only views verified by PoV™ are counted. Views which are considered to be verified will be added to a publicly accessible database containing anonymized data regarding the views.
 - b. Verasity will provide free, open-source tools to provide transparency and accountability of the system. With these tools, users and third parties can review the data to ensure its accuracy and credibility. Although view data is anonymous, individual users can generate their own

unique ID to verify views recorded for their ID are accurate and not manipulated.

c. To ensure that the data stored within the publicly accessible PoV™ database is bonafide untampered data, all view data is sent to Verafiers as well as to the Verasity servers. This allows Verafiers to automatically check that the data on the Verasity view database is accurate and has not been altered. The Verafier application (an open source application) automatically checks that views on the blockchain are verified and matches views on the public database. If there is any corruption or change to the data an alert notice is automatically provided.

The PoV™ system prevents multiple methods users may try to manipulate view counts and audience metrics such as:

- Automated repeated viewing of videos (looping views)
- Attempting to load multiple videos in parallel
- Loading videos in hidden windows / tabs
- Attempting to manipulate analytics without watching content
- Verasity or other party altering the views database

DPoS Blockchain

A ledger is a crucial component of a financial platform as it stores account balances and the transaction history. It must be maintained with utmost care and accuracy to ensure that the account balances are always correct and up-to-date.

In a system with a central authority (e.g. a bank), the ledger that is maintained by the authority is accepted to be the correct one. Without a central authority, multiple versions of the ledger can occur and this creates a problem as to which of the ledger versions is the authoritative and correct version. Using blockchain technology, a consensus can be reached as to which ledger branch is accurate.

One methodology to reach a consensus is Proof-of-Work (PoW). This is where a large amount of computing power is used to verify transactions and create new blocks on the Blockchain. While this method is able to maintain an accurate ledger, due to the large computing requirements there are limitations on transaction volumes, long transaction confirmation times, high transaction fees and a large amounts of wasted computing resources.

Another methodology is Proof-of-Stake (PoS). This does not require large amounts of computer resources to create new blocks, but instead assigns the creation of a new block to users based on the amount of the cryptocurrency they already hold. The issue with PoS is that those holding a large amount of tokens are more likely to be assigned to witness the creation a new block, whereas those users who have a low amount of the tokens are unlikely to ever be assigned to witness the creation of a new block. This means that users who hold a large amount of tokens can affect blockchain performance and it is very difficult for other users to remove them in the event that they are not acting in the community's best interest.

Verasity has chosen to use an evolution of Proof-of Stake called Delegated Proof of Stake (DPoS). This method, provides the fastest, most efficient and fairest mechanisms for transaction verification. In DPoS users can be elected as representatives to witness the creation of new blocks. Users can be elected as representative by other users of the system based upon a consensus of trust of that user by the community.

This way even users who aren't running the full client are able to have an influence over the creation of new blocks. An elected representative can be removed by the community by voting in new representatives. This could occur in situations such as a representative failing to witness the creation new blocks.

Each user in the community has their vote influence weighted proportionally to the number of tokens they hold. This means users who own a large number of tokens have a larger say in who the elected representatives are.

To take complete control of the elected representatives a user must hold more than half of all the tokens and this is therefore less likely to occur than a single user being able to acquire a controlling position in a PoW system.

Verafiers in the Verasity DPoS

In the Verasity DPoS Blockchain, participants that can witness and verify transactions are called Verafiers. As detailed above, Verafiers are elected by users who hold VERA. Users who hold more VERA have more influence over the electing Verafiers. Verasity recognizes that Verafier diversity is key to mitigating political, legal, economic, infrastructural and other operational risks. Verasity will endeavour to provide its services across 150 countries and encourage geographic dispersion of nodes.

Verafiers are compensated with VERA for their services to the network to encourage users to become Verafier candidates. The Verafier compensation rate is maintained at a level high enough to ensure that there is at least an order of magnitude more Verafier candidates than the number of Verafiers required in the system. This provides VERA holders with a wide choice of Verafier candidates to pick from.

Verafiers are voted for by VERA holders. Each VERA holder gets 1 vote per VERA held. The total number of Verafiers in the economy will be dictated by the number of Verafiers required so that the majority of votes have been utilized. In practice, this means that if the majority of voters vote for 20 Verafiers, 20 Verafiers will be elected. The only exception to this is if the majority of the votes go to less than the minimum number of Verafiers required in which case the top (x) Verafiers by the vote count are then elected. This approach maintains an appropriate number of Verafiers to keep the system decentralized.

To become a Verafier and be eligible to be voted in to verify transactions, a user must satisfy certain technical requirements such as:

- 1. The user must install the VeraWallet application.
- 2. The computer and the VeraWallet application must be running and online.
- 3. The VeraWallet application must be fully synchronized, and will keep a full copy of the Blockchain.

The Verafiers that cease to satisfy the technical requirements will:

- 1. Fail to verify transactions.
- Not receive new VERA.
- 3. Can be voted out promptly by the VERA holders.

Bootstrapping the Verafier Cloud

During the rollout period, Verasity will operate a minimum of 4 backup Verafier nodes in key regions (North America, South America, Europe and Asia Pacific). These nodes will guarantee network resilience against

major infrastructure outages. These nodes are required as backups to participate in verifying transactions until third party Verafiers are voted in.

The backup Verafier nodes will be clearly labeled in the Blockchain code and on the site. The users will be urged to vote for the Verafiers not controlled by the Verasity Foundation as soon as possible to transition to a diverse set of trusted and independent Verafiers.

Protecting the Verafier Ecosystem

The Verafier pool is a core piece of both the commercial transaction system, as well as the audience metrics components of the system, making the robustness of very high importance.

DPoS systems in general are extraordinarily resilient to most attacks. However the Verasity DPoS system has been further enhanced by both management and operational policy. A good example of this is a weakness that many blockchain systems have commonly known as the 51% attack. This is a method by which an entity or coordinated group attempts to gain 51% of the total tokens in the platform, by which carrying the majority of votes for verifications, and in theory be able to inject erroneous data into the system.

Without exploring the full theory around these types of attacks, there is a mechanism to prevent this on the Verasity platform:

Verasity always maintains a set of trusted Verasity Verafier nodes as backup to the public community of Verafiers. These Verafiers are always active and selected in the verification process. This allows extremely quick detection of erroneous errors on the Blockchain and immediate correction.

Finally these types of operations are highly uncommon simply due to the motivation around the destruction of value. It would never be economical to formulate such a plan, as any plan of this sort would require the acquisition of 51% of the entire economy, and any damage to the economy would destroy the value of the original capital required to execute this plan.

The Verasity Economy

VERA Token

The Verasity platform and economy is powered by VERA which is a utility token that functions as a medium exchange between participants within the Verasity ecosystem.

New VERA supply will be minted and distributed to the community based on both the organic growth of the platform and governance via the velocity of money as explained below. VERA will be purchased by users and investors, which will drive the value of VERA.

Please note: the ERC20 VERA Tokens created and distributed on the Ethereum Network are for the purpose

of an initial Token sale only and will fund the development and adoption of the Platform. Once the Platform is live, these tokens will be replaced by VERA running on the Verasity Blockchain on a 1:1 basis. The supply of the ERC20 VERA Token is 12,491,500,000. More information can be found regarding the VERA token sale (the "Token Sale") at www.verasity.io/.

What are the token supply mechanics?

The total token supply for the Verasity ecosystem will be variable and based on an inflation target of 3%.

The key to growing a video content economy is returning value to those who create value. Verasity has designed the ecosystem mechanics so that all participants will be rewarded for positive interactions on the platform.

In the Verasity DPoS system, Verafiers are rewarded for their resources dedicated to verifying transactions on the Blockchain. This involves newly minted VERA being added to the Reward Pool to further incentivize the growth of the economy. To ensure sufficient liquidity in the market minting of VERA will be directly related to the the velocity of money in the Verasity ecosystem. Newly minted VERAs are allocated to the Reward Pool.

The Reward Pool is distributed to Viewers, Content Creators and Verafiers. Unlike the traditional PoW means of distribution, where miners are competing over raw computing power, the actors in the Verasity network are incentivized to compete in ways that add value to the network.

Users / Viewers

Viewers will be rewarded for watching videos with VERA. Earned VERA can be claimed when the minimum threshold is reached.

Creation of new VERA is based on the Velocity of Money (VoM) within the economy during a set time period. By linking new VERA to VoM, VERA is created at a rate that is proportional to the growth of the platform and as such effectively scales, without affecting the appreciation of VERA, as more users agree the value of content on the platform. New VERA will be distributed to both Viewers and Creators based on engagement with the platform.

In future developments, Verasity will explore additional ways users can earn VERA that help add value to ecosystem such as cloud storage, search or other services.

In addition to newly minted VERA, a portion of all spent VERA will be redistributed for promotional activities such as sign-up incentives, engagement activities and other platform incentives designed to grow the community and economy.

Earning VERA as a User

Users of the Verasity Platform are able to earn VERA by engaging with the platform, primarily by watching videos.

Verasity will provide additional promotional methods for users to earn VERA to facilitate growth in the ecosystem and economy. These may include:

- 1. Sign up reward Initial tokens delivered upon sign up to get Viewers adopting the platform and transacting.
- 2. Share Video URLs are generated and easily shared on social media. The user who shares a link can earn VERA for each signed in view generated by the link.
- 3. Referral Users who convert new users receive a bonus for each new sign up.
- 4. Watch ads Users who opt-in to watching advertising will earn VERA for each advert they watch.
- 5. Daily Bonus the first X number of videos users watch will earn extra VERA.

Creators and Publishers

Any user can become a Creator and upload content to the platform. Unlike other platforms, the Verasity Platform will treat content upload as a service that needs to be balanced, rather than allowing unlimited uploads from any Creator. Through an upload limit for each Creator, the platform costs associated with hosting content can be managed based on how the economy values past content.

Creator upload limit increases based on three factors:

- 1. Promotional incentives provided by the platform. This includes incentives such as sign-up bonuses, getting the first 100 followers and other key milestones.
- 2. Global use of the platform will increase the upload limit of all Creators over time. The more VERA transactions that are made, the faster the upload limit will increase.
- 3. VERA transactions made on a Creator's channel will increase their upload limit. The more transactions made, the faster their upload limit will increase.

For Creators who add value to the economy and ecosystem, the upload limit should never be reached. Creators who upload a large amount of content that adds value to the economy and ecosystem may need to spend VERA to continue to upload, however, as the content is valuable they should receive more back than the upload cost. Creators who upload a large amount of content that does not add value to the ecosystem will have to make increasing VERA payments to continue to upload. This prevents spam / low quality content or users abusing the economy and ecosystem.

Content funding models include:

- 1. Free-to-view with optional donation Creators receive individual VERA donations from viewers who enjoy their content;
- 2. Pay-per-view (TVOD) Creators set a rate of VERA that each Viewer will pay to unlock a
- 3. video users will be able to receive a short preview of the content before paying;
- 4. Monthly subscription (SVOD) Creators charge a monthly VERA fee for their Viewers to access their paid content. This could either be used to access exclusive "VIP only content" or as an alternative to SVOD video:
- 5. Advertising (AVOD) Ads are entirely optional for Viewers. However, watching advertising allows users to earn VERA which they can in turn pay Creators with;
- 6. Spark Marketplace Creators can opt to sell VeraSparks in their channel, and a part of their channels future earnings in order to raise finance to produce content.

Creators set the monetization model, the price, and fully control their content. As the Verasity Platform will be providing storage, playback, development and maintenance of the network, a transaction fee is allocated to the Verasity Foundation. Revenue generated from transaction fees will be reinvested into the platform,

operating costs and research and development.

Advertisers

Although the Verasity platform is not fundamentally built on advertising to succeed, it will have an opt-in advertising feature where Advertisers can pay to reach an engaged audience who have opted-in to receive an advert and are rewarded directly with VERA. In today's age, Viewers are looking for something in return from Advertisers for their time and data, otherwise they will chose to use adblock to avoid ads. The Verasity model changes this by offering Advertisers a highly engaged audience on a Cost Per View (CPV) model, using the Proof of View Blockchain ledger to guarantee delivery and view. This circumvents industry issues in ad fraud, bot traffic, and adblock, and offers Advertisers greater value to what they get today while Viewers directly get value (VERA) in exchange for their time and attention. Viewers in return, will spend the VERA on content which goes directly to the Creator.

Verasity's team includes advertising technology experts who understand the market and its issues in detail.

Advertisers will buy VERA to spend in the ecosystem to reach their audience. They will set their budget and target audience, and every time an ad is successfully delivered, VERA will be deducted from the Advertiser wallet and go to the Viewer based on a qualified view. By removing multiple middlemen which can swallow up to 70%¹¹ of the value, the result is more cost effective media for the Advertiser, and more value comes back into the community.

Sponsors

Many Creators and Publishers today work directly with brands in the form of sponsorship. While sponsorship can take many forms, it commonly includes branded content, product placement and in-content promotion.

Verasity will enable sponsorships to be paid for, and importantly verified, directly through the platform. This will be optional for Creators and while some sponsorships may still take place outside of the platform, there are multiple incentives for both Sponsors and Creators to interact through Verasity.

Sponsors gain assurances that they are paying for legitimate reach through the Proof of View technology and will have new ways to activate sponsorships across the platform.

Creators will gain exposure to potential Sponsors and be able to increase the value of their channel (for the Channel Stake Marketplace) by receiving payments in VERA.

¹¹ https://www.campaignlive.co.uk/article/truth-behind-lack-transparency-tech-tax/1429467

Benefits of Proof Of View (PoV)™ Technology

Proof of View technology certifies authentic views on the Blockchain. This filters out bad actors, bots and fake views. This reassures Advertisers and Sponsors legitimacy of their investment and guarantees reach of audience. There have been many accounts of platforms distorting campaign delivery for profit and bad actors cheating using bots to increase views. With Proof of View, all views are stored on the Blockchain ledger and are transparent, building trust and confidence amongst Advertisers, Sponsors, Creators and Viewers.

How does Community Interaction Grow the Economy and Token?

For many Creators and Publishers, the scale of their audience creates a community around their channel and content. The most avid members of these communities provide both direct and indirect value to the Creator and are often their biggest advocates. Providing additional opportunities for a community to connect and become further involved with Content Creators will be fundamental to the success of the Verasity economy and ecosystem.

On current platforms, Creators have limited ways to exchange value with their community. Viewers who donate or subscribe will usually only receive small cosmetic rewards, such as chat emojis, or shout outs from the Creator as thanks. Despite this, there are many viewers who still participate in these activities.

The Verasity platform provides Creators far more control and options to engage and reward their biggest fans and advocates. Through multiple monetization routes, Creators are able to effectively value their content and allow their fans to directly contribute to their earnings, without requiring the use of third party platforms. As both Viewers and Creators have lower barriers to engage and greater benefits in doing so, it in turn increases the likelihood of a viewer becoming part of their community and an advocate.

In addition to direct content monetization, VeraSparks bought and sold through the Spark Marketplace allows the community to directly contribute to the development of a Creator or Publisher. Unlike traditional crowdfunding, users who hold VeraSparks in a Content Creator's channel through Verasity directly benefit from the future success of the channel. Due to this, Verasity believes that users will be more likely to participate within the Spark Marketplace across more channels than in current third party crowdfunding systems. This will help successful Creators and Publishers grow quicker on Verasity than on other platforms. Additionally, as there is a direct incentive for this success, users who hold VeraSparks become even greater advocates of the Creator and in turn help grow their channel further.

The above enables communities and advocates more opportunities to engage Creators which provides long term growth and uptake in the Verasity economy and ecosystem as a whole. In turn, this may further increases the value and velocity of VERA, the transaction volume and users within the ecosystem which fuels long term, sustainable growth.

How will the Verasity Economy reach stability?

By regulating money supply, the Verasity Foundation intends to stabilize price levels within the Verasity economy. Money supply may impact inflation directly by making tokens more or less scarce or indirectly

through minting tokens that are used to incentivize market participants to engage in transactions. Hence, finding the right policy for regulating the supply of money is key to ensuring long-term price stability and enabling Verasity to become a successful economy.

The Verasity Foundation plans to regulate the supply of money via a deterministic mechanism on the blockchain, while keep inflation at a moderate rate of 3% per year in order to ensure sufficient liquidity and stable growth of the economy. The minting mechanism is designed to hold prices at a constant growth rate that corresponds to the overall growth of the economy. The mechanism mints tokens so that the increase in money supply matches the expected increase in demand for VERA tokens. The Verasity Foundation plans to use a straightforward and simple to implement method to form expectations about future growth that is based on historic growth rates of the last two periods (as defined in the Economics paper, see below).

The mechanism has been simulated in order to test the stability of the Verasity economy. Based on the above mentioned assumptions, the simulations indicate that a simple mechanism, approximating expected demand for VERA tokens with historic price levels, can result in a stable money market. This result even holds when external shocks are introduced.

The simulations indicate that a moderate positive inflation target performs better than a zero-inflation target, as the latter induces strong reactions by speculators, which may destabilize the economy.

Assuming that speculators form adaptive expectations, the simulations show that their strong reactions may destabilize the economy, especially in the initial phase when demand is very volatile. However, if adaptive speculators do not react right away with all their assets, the mechanism is able to produce a stable outcome. Finally, the simulations illustration that shorter backwards-looking periods result in more stable price developments, as they allow for a swifter reaction to exogenous shocks.

In the event that the platform experiences more than a short term seasonal decrease in transactions, and therefore experiences materially reduced aggregate demand, the minting of VERA will be reduced; potentially down to zero. This is the lowest point of supply as it is not practical, nor desirable, to remove VERA from users. If zero supply is insufficient to correct the downward pressure then the Foundation will reserve a proportion of its transaction fee to decrease the amount of VERA in circulation. This "stabilization fund" can be seen as the equivalent of a bank Reserve Requirement¹² which aside from bolstering the bank's balance sheet is a strategy central banks utilize to increase or decrease the money supply. This monetary policy will also be bolstered by fiscal policy implemented by incentivizing longer term VeraSpark holders.

The majority of new VERA that is minted will be distributed to users based on the amount of video content they watch within the time period. The calculation of this is relatively simple; If in a period 10,000 VERA from the Reward Pool were allocated to viewer consumption and users collectively watched 100,000 minutes of video, a user would receive 0.1 VERA per minute of content they watched.

Each user will be limited to earning VERA through content watched to a real time rate; a maximum of 1 minute of earnings per minute in the time period (a user cannot watch more than 60 mins of content in 1 hour). This avoids users creating multiple browser sessions to try and earn VERA faster. In the unlikely event that there are transactions on the platform but zero content views, the tokens minted will be immediately burnt.

"Introducing its own token allows Verasity to organise its video platform as an independent economy, and therefore to use tools from fiscal and monetary policy to stabilize price levels and foster growth"

Dr. Christian Jaaq, Cryptecon (Center for Cryptoeconomics)

For more information read the full Economics paper: http://verasity.io/documents/verasity_economics_paper.pdf

How Users can Buy and Sell VERA

Users will be able to send popular cryptocurrencies such as BTC and ETH to VeraPay, to exchange for VERA at its current rate whilst on the platform. The management team aim to create a seamless route to enable new users in and out the economy whilst safeguarding the community and supporting local regulations.

Profits go back to the Platform and Operating Costs of the System

A small transaction fee is taken to run the platform, pay for the operating costs and expenses of Verasity, to drive mass user adoption and for research and development to enhance the platform and economy.

Content Uploading Balance

A platform needs to incentivize creators to upload content. However, this can lead to a flood of low-quality content. An ever-increasing amount inflates platform costs and subsequently reduces the earnings of Creators and the ability for Viewers to find valuable content.

Verasity will give Content Creators the freedom to manage their content strategy as they wish while preventing any individual from impacting the overall economic sustainability. This means:

¹² https://www.investopedia.com/terms/r/reserveratio.asp

- 1. Each Creator has an upload limit. If a Creator is under their upload limit, he/she is free to upload content. When a Creator is over their upload limit, they have to pay VERA to upload.
- 2. Creators who have an audience that value their content may wish to pay to upload more content and therefore generate a profit. However, Creators who are uploading large volumes of low value content will have to pay to upload thus disincentivizing spam / low quality content.
- 3. The upload limit for each Creator will increase based on their individual performance, global platform use and other incentives to help grow the economy as a whole. The increase in the limit is based on an algorithm which is further detailed in the token supply and mechanics section of the white paper.

The intention of the upload limit is to prevent users from flooding the economy with low value content. Creators who are uploading reasonable quantities of valuable content should not be affected by the limit.

Channel Venture Backing: Spark Market

The Verasity platform will provide a mechanism for Creators and Publishers to both build brand loyalty and to accelerate growth in the development of their channel by offering a revenue share in the channel to other participants within the Verasity ecosystem. The marketplace for these transactions is the Spark Marketplace. Through the Spark Marketplace, Verasity also provides a new mechanism for VERA Speculators to participate directly in the economy.

VeraSparks

Content Creators can use VeraSparks to offer a portion of future commercial transactions in their channel to participants. A VeraSpark entitles the owner to a portion of the VERA collected on the channel while they hold the VeraSpark. Participants will be able to buy and sell VeraSparks through the Spark Marketplace.

To help guide users who participate in the Spark Marketplace, Verasity will provide a "recommended market value" of a particular channels VeraSpark, calculated by a Verasity algorithm that takes into account verified Proof of View (PoV™) of the content, the total commercial transactions on channel, the recommendation engine and other relevant parameters.

Users who purchase VeraSparks may also benefit from an appreciation in the value of the VeraSparks they own. As an incentive for participants to hold VeraSparks, Verasity will provide a VeraSpark reward program for VERA holders that hold their VeraSparks for periods greater than three months.

The VeraSpark Program works as follows:

- Content Creators can create VeraSparks for their channel which they may then list in the Spark Marketplace. This will walk them through the steps of how many VeraSparks they would like to create and the amount of VERA they will initially request for each VeraSpark listed.
- 2) Participants in the Spark Marketplace can see listings for VeraSpark offerings, and also search for specific content channels.
- 3) Once a participant has selected a channel, they can see how many VeraSparks are offered for that channel, and what price they are listed for in VERA.
- 4) The participant will be able to see who is selling the VeraSpark, which could be the original channel owner, or the current holder of the VeraSpark.
- 5) Once the participant decides to purchase one or more VeraSparks, the participant pays for

- the VeraSpark with VERA.
- 6) The proceeds from this sale go directly to the current owner of the VeraSpark, minus a small platform transaction fee, and the Smart Contract for the VeraSpark is assigned to the participant.
- 7) As channel revenue is generated, the Smart Contract automatically allocates the VERA earned to the holder of the VeraSpark.

TotalSparks

TotalSpark is similar to a VeraSpark in that it is a Smart Contract that entitles the owner to a share of future commercial transactions while they hold it. There are some key differences between a TotalSpark and VeraSpark:

- 1. A TotalSpark entitles the owner to a portion of the Verasity Foundation commercial transaction pool rather than a portion of commercial transactions from a single channel that a VeraSpark provides.
- A TotalSpark contract expires after a period and no longer provides returns, it cannot be sold on the Spark Marketplace past that date. When a TotalSpark expires, the current holder is returned the initial VERA payment made to purchase the TotalSpark and the TotalSpark ownership returns to the Verasity Foundation.

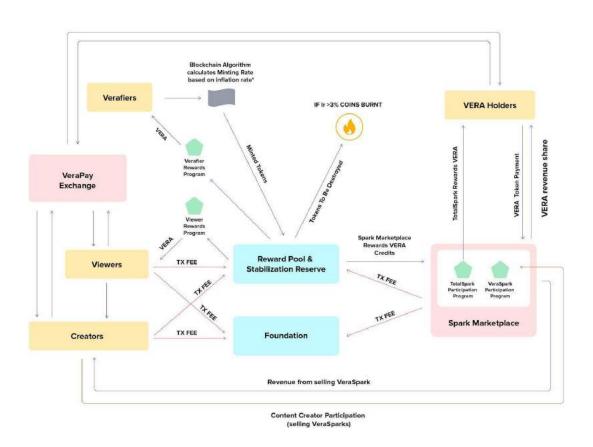
TotalSparks are offered as a method to decrease the volatility of VERA by incentivizing VERA Holders to commit to hold their tokens for a fixed term.

The TotalSpark program works as follows:

- The Verasity foundation will create a range of TotalSpark Smart Contracts that can be
 purchased for a rate set by the Verasity Foundation. TotalSpark provide a share of Foundation
 Revenue until the expiry date. The larger the amount of TotalSparks purchased, the shorter the
 period of time until expiry.
 - a) Example TotalSparks
 - i) 1 100 VERA (365 Day Expiry)
 - ii) 101 1,000 VERA (240 Day Expiry)
 - iii) 1001 5,000 VERA (120 Day Expiry)
 - iv) 5000 10,000 VERA (80 Day Expiry)
- 2) Participants pay for the TotalSparks they desire with VERA, and are assigned ownership of the TotalSpark Smart Contract. This is the start of the expiry period.
- 3) A share of the Foundations commercial transaction pool is allocated to the TotalSpark owner, and paid out in VERA on a daily basis. This payment is proportional to the size of TotalSpark

held.

- 4) In the period between buying the TotalSpark and its expiry date, the owner is able to resell the TotalSpark within the Spark Marketplace. They are able to set the amount of VERA at which another participant is able to take ownership of their TotalSpark.
 - a) Once the TotalSpark has changed ownership, the new owner will then receive the share of the Foundations commercial transaction pool until the expiry date. The old owner will stop receiving any on-going payments.
 - b) When a TotalSpark changes ownership, a small transaction fee is taken.
 - c) When a TotalSpark changes ownership, the expiry date does not change. E.g. If the first owner held an TotalSpark for 80/240 Days before it changed ownership, there would still only be 160 days until the TotalSpark expired.
- 5) When the TotalSpark expires, the current owner is returned the original VERA payment and the TotalSpark ownership returns to the Verasity Foundation.



Producing a Stable Economy The

Problem with Speculation

When too many Investors act as short-term Speculators, treating cryptocurrencies as commodities and not products, the value of Coins have varied sharply on daily basis, and in some cases minute by minute. This volatility is unsustainable when Creators will be setting the prices of their videos and Viewers in the community are choosing whether to spend their VERA or not. The Foundation has invested a significant amount of time and resources into structuring an economy where these shock effects, witnessed in almost all other major cryptocurrencies, are mitigated.

The Theoretical Solution

To increase the stability of the system, investors need to hold VERA for longer periods rather than using the Token as short-term speculation. The Foundation believes that the Investors should be incentivized to choose this rather than being prevented centrally from trading their VERA as they wish. Fortunately, the economic analysis (see Economic Paper) demonstrates that not all investors need to hold to allow for stability. The data shows that, provided the economy can incentivize a portion of the Investors to hold their investment during periods of instability in the market then, inflation can be maintained at 3%.

The 3% rate was ascertained through stochastic analysis and thousands of simulations balancing the desire to create an incentive for individuals to spend VERA against a higher rate of inflation that would put off Investors by devaluing the Token materially. It is of course true any rate of inflation will decrease the value of a currency within an economy over time, but it is expected that the overall increase in the value of the community and platform will outstrip the low level of internal inflation.

This theoretical solution should include the following caveat that as can be seen from the analysis there may be some short term deflationary pressure. This is due to high growth rates in users of the platform. As Central Banks have demonstrated over time inflation/deflation is difficult to manage and the only realistic way to avoid short term deflation would be to throttle growth. This is neither realistic nor desirable.

Through the Spark Marketplace, Verasity provides an incentive for investors to hold VERA for longer periods as well incentivizing engagement within the community.

The practical application

A significant part of the existing economy is the VeraSpark. A VeraSpark is a Smart Contract that represents a percentage ownership in a content channel. It also entitles the VeraSpark owner to a portion of the VERA collected on the channel while they hold the VeraSpark. VeraSparks will be tradable in the Spark Marketplace. VeraSparks are initially offered on the marketplace by Content Creators and publishers in exchange for VERA. This allows Creators a way to fund growth and development of their channel.

We expect people to buy VERA to:

- 1. Watch videos (subscriptions, PPV, tipping)
- 2. Allow Creators to increase their upload limit faster
- 3. Invest directly in Creators/Publishers via the Spark Marketplace
- 4. Invest in VERA to hold as a long-term Speculator

5. Invest in VERA as a short-term Speculator

Types 1-4. do not present an issue for the economy's stability and are encouraged, the more people the Foundation can convert from 5 to 4 above, the greater the stability in the system. In addition to this, the higher the rate of purchase of VeraSparks, the more they add to the community. In an ideal world all the 4 and 5 Investors will convert to 3 in time. The incentives to hold VeraSparks are therefore critical to the efficient running of the economy and are as follows:

- 1. While holding the VeraSpark, the user receives a proportional amount of the channels revenue. If a user has 10% of a channels VeraSparks and the channel makes 100 VERA, the VeraSpark holder would receive 10, and the creator 90.
- Users who hold VeraSparks can re-list them in the marketplace to be purchased by other users for VERA. Once ownership of the VeraSpark changes, the new holder then receives future earnings of the channel.
- 3. In addition to VeraSparks, users can also take ownership of TotalSparks. A TotalSpark entitles the owner to a share of the Verasity Foundations commercial transactions while it is held. Unlike a VeraSpark, a TotalSpark has an expiry date. When a TotalSpark expires, the current holder is returned the initial VERA payment made to purchase the TotalSpark and the TotalSpark ownership returns to the Verasity Foundation.

Core Team, Investors and Contributors

Core Team

The team are seasoned professionals with proven track records with high performing businesses in the media, video and technology sectors. The core team have been involved in the project together since 2017. The development team and management are full time and have been collaborating together for four years.



David Orman - CEO and Co-Founder Verasity

Spent last 10+ years investing, advising and working in video technology businesses.

Previously VP at Joost, Eurosport Sales Director. Co-Founder of Hatch-House Venture

Consultancy.



Scott Brown - Executive Management

VP Product Management, Akamai Technologies; CEO, Octoshape; VP Technology Fellow, Turner Broadcasting; Director Media Systems, AOL



Mark Ramberg - Executive Management

GM Media & Entertainment, Amazon; VP Business Development, Akamai; Business Development, Microsoft



Jin Young Choi - Verasity Ambassador for Asia

Mr Choi is the CEO of Bitbank, CEO, Woorim Holdings, CEO, East Nine Co. Ltd, CEO, Vision Group Co. Ltd and Permanent CEO, D!conomy LAB.
Mr Choi was the Mayor of Namon City for two terms and is the Executive Commissioner of World Franchise Council plus also lectures at numerous universities.



David Rowe - Co-Founder Verasity
Founder Hydro66, CEO Black
Green Capital, Founder Easynet
Group that was sold to BSkyB,
Former Managing Board Member,
Sky



Chris Gale - Co-Founder Verasity

Founder and CEO of Ad Tech Company, Odyssey Mobile which successfully exit to Phunware in 2014 who later listed on the Nasdaq in 2018. Crypto Investor and Blockchain Advisor. 15 Years of digital media and technology.



Adam Simmons - Co-Founder Verasity

Worked for the last 8 years within online video, including globally for eSports publishers. Expertise within Content management and online marketing



John Rankin - Business Development

Video publishing and advertising entrepreneur. John founded and built a global video advertising business with multinational entertainment company Outfit 7, creators of hit mobile app Talking Tom which received 7 billion downloads.



Kyrylo Bybyk - Lead Engineer, Blockchain Developer

High-load C/C++ developer with 11 years of experience. Strong background working with online video platforms with high traffic volumes. Co-inventor of Proof of View (PoV)™, patent pending



Chris Morof - Senior Engineer

Ex. CTO Video Ad Platform, Creator of VRSynapse, Founder of Beacon Heaven, Blockchain Expert



levgen legorochkin - Blockchain Developer

Experience working with online video platforms with high traffic volumes. Blockchain developer. High-load back-end C/C++ developer. Application Security Engineer



Dmytro Medianik - High-load back-end developer and security Engineer

High-load back-end C/C++ developer. Security/operations engineer with 10 years of experience. PJSC Nord, IT Director. Security access protocols will be maintained by Dmytro



Mykolai Chapny - Blockchain and back-end developer

Full-stack developer and blockchain enthusiast.



Anton Lukashenko - Full-stack developer

Full-stack, JavaScript developer

Nova Poshta development manager



Tom Hillman - Community and Communications

Audience Development expert: 10 years experience in media, digital marketing, communications, social media, and community building ex. Guardian Media Group and other global publishing entities



Danielle Francis - Marketing Seasoned digital marketing executive with a strong focus on customer acquisition and growth. 5 years in digital marketing and advertising currently with M&C Saatchi



David Archer - Legal Counsel Senior Partner, Pitmans, London. Over 30 years experience in trust law, Not for Profit entities, Dispute Resolution, and Compliance

Advisors



Dr. Christian Jaag - Advisor

Founded the Centre for Cryptoeconomics and is responsible for the economics for this project. Managing Partner, Swiss Economics and Lecturer at the Universities of St.Gallen and Zürich. He advises corporate and public-sector clients on strategic issues pertaining to Blockchain technology and cryptoeconomics



Andy Long - Blockchain and Data Centre Expert

20 years experience in telecoms and finance in strategy, business development and management. Director Strategic Development, Black Green Capital, responsible for leading the commercial launch and build of Hydro66 as startup CEO and continues to advise on strategy in the datacenter and Blockchain space



Matt Heiman - Advisor, Investor Founder of Diagonal View (exit to Sky PLC 2017), Mobix Trading, Mobix Interactive (exit to SeaChange 2008), Founding Investor in Just Giving (exit to Blackbaud 2017), Advisor to Channel 4, Vizimo, The Cloud and Palringo



Simon Wajcenberg - Investor, Advisor

Experienced Investor and Entrepreneur. Founder of North Block Capital. Previously Simon founded numerous pioneering digital businesses including Stocknet.co.uk, Freequotes.co.uk, StrikeAd and POW Token



Jon Hook - Advertising Technology Expert

Advertising executive and entrepreneur experienced in building, launching and running mobile technology and media businesses. Held senior level positions with WPP, Adcolony (Opera) Odyssey and holds board positions at the Mobile Marketing Association, the IAB and BPA Worldwide



Sanjin Hong - Advisor

Entrepreneur and investor.
Co-founder and CEO of Chain
Cabinet (a blockchain startup
platform). Partner at Kstartup
(a startup accelerator based in
Korea). Former product
manager at Microsoft.



Christopher Keshian - Advisor

CEO of APEX Token Funds. A group who invest in crypto funds such as Pantera and Multicoin Capital. He's also a Managing Partner at Neural Capital and a leading innovator in blockchain technology. He was the CEO/Co-founder of the first fiat gateway to the Ethereum ecosystem.



lan Scarffe - Blockchain Expert

A leading expert in Bitcoin, Blockchain and Crypto industries, lan is at the very heart of revolutionizing the financing industry across the globe and currently consults and advises for a range of multi-million dollar companies.



Nakhoon Choi - Lawyer, Entrepreneur,

Advisor of Korea BlockChain Association Former CSO of Noom (Healthcare App based in New York City) Former Case Handler in DG Competition, European Union, Brussels. Experienced in Blockchain and ICO Government Regulation in many countries.



Merv, Leslie - Social Video Expert

Experienced social video specialist & consultant who has held senior positions with multi-platform networks and video technology companies such as ZEFR, Brave Bison and Little Dot Studios.
Strategist in influencer engagement plus content operations for major global rights holders



Joel Kovshoff - Advisor

A seasoned multinational business educator who has taken his expertise in education and applied it the world of digital assets and cryptocurrency.
Serving as the CEO and founder of MylCOPool; as well as being a co-founder and the CEO Athena Trading Bot, Joel is very active in the cryptocurrency community.
Joel currently works full time as a Blockchain advisor and educator and resides in Bangkok, Thailand.

Partners







Blockchain Investors

NorthblockCapital.com

Venture Capital

Blackgreencapital.com

Crypto Economics Experts

cryptecon.org







Consulting Partner

mlgblockchain.com

ICO Identification Platform

tokeny.com

Tax Experts

cryptocpas.com







CDN Partner

akamai.com

Video Partner

hypercube.video

Legal Specialists

pitmans.com

"Verasity is a white label version of an ons an Akamai network partner the white label solution utilizes Akamai's 'media accelerline video platform utilizing Akamai's CDN network as well as key technologies of Akamai. Aation efficiency (MAE)' solution which has scaled on this white label online video platform to over 8PB data per month." - Joshua Frost Niven, SME Sales Specialist - Akamai

Roadmap

- 03 2017
 - Product
 - Integrate TCP fallback into the player for seamless use on non UDP-enabled browsers Delivered
 - Project
 - Founders identified opportunity for blockchain-based video platform Done
- Q4 2017
 - Product
 - Test UDP video player with Akamai at 30m+ unique users per month **Delivered**
 - Project
 - Assemble core team and advisors Done
 - Investigation into blockchain technology Done
 - Write and validate White Paper **Done**
- 01 2018
 - Product
 - Release proof of concept for VeraPlayer Delivered
 - Project
 - Creation of Foundation structure Done
 - Announcement of project, publishing of White Paper & Economic Paper Done
 - Launch Public Sale website **Done**
- 02 2018
 - Product
 - In-player earning VERA while watching **Delivered**
 - Release proof of concept for VeraWallet Delivered
 - In-player user management Ongoing
 - In-player earning 3rd party crypto tokens while watching Ongoing
 - Release proof of concept for VERA minting apps for desktop & mobile Ongoing
 - Design and architecture for Verasity blockchain
 - Release proof of concept for Verasity video sharing website (verasity.tv)
 - Project
 - Fundraise through Private Sale Ongoing
 - Conduct Public Sale
 - List VERA on leading crypto exchanges
- Q3 2018
 - Product
 - Release and test Verasity blockchain with other Verasity platform components
 - Release MVP of blockchain-enabled VeraPlayer
 - Release MVP of blockchan-enabled Verafier apps for desktop OS
 - Release MVP of blockchain-enabled VeraWallet
 - Release CMS and analytics for verasity.tv
 - Add monetization through advertising to verasity.tv
 - Project
 - Convert VERA tokens onto Verasity blockchain
 - Expand team of engineers

04 2018

- Product
 - Release beta of VeraPay
 - Release full version of Verasity blockchain
 - Release beta of blockchain-enabled VeraPlayer
 - Release beta of blockchan-enabled Verafier apps for desktop OS
 - Release beta of blockchain-enabled VeraWallet
 - Release MVP of blockchain-enabled video sharing apps for iOS, Android
 - Release MVP of verasity.tv to select group of video creators
 - Release beta of verasity.tv to general public

- 2019
 - Product
 - Launch full version of VeraPay
 - Launch full version of VeraPlayer
 - Launch full version of Verafier apps
 - Launch full version of VeraWallet
 - Launch full version of verasity.tv
 - Release MVP of blockchain-enabled video channel marketplace
 - Release beta of video channel marketplace
- 2020
 - Product
 - Scale platform usage to 15m holders of VeraWallet
 - Launch full version of video channel marketplace

Building Community and Go To Market Strategy

The community of 'prosumer' video content creators is global, and their appetite for a level playing field to monetize their work according to value, not popularity, is clear. Based on latest research and public statements from publishers of all sizes, all are eager to discover new ways to monetize their content libraries, and to fund a future project pipeline.

Verasity sets the stage for an efficient and level commercial playing field for the monetization of all types of video content from short-form user generated content, to professional quality feature length films.

There are three key stages of growth of both the Verasity economy and ecosystem of users:

- Launch
- Advocate Scale
- Mainstream Adoption

Pre-Launch and Launch

To mitigate investment risk in Verasity, prior financing is in place and the entire team and infrastructure funded to date. Current funding without additional Token Sale proceeds could take the project to protocol completion at a slower pace to the current roadmap. The risk would not be completion but rather scaling the economy at the necessary rate to achieve sustainability.

When gaining initial traction within the marketplace, it is essential to provide an environment suitable for the first Creators/ Publishers to join the platform. During this phase (first 3-6 months) the platform will provide additional incentives both for Creators and Viewers.

While users will be free to sign up as Creators at launch, Verasity will invite select Content Creators to participate in both the final stages of testing and the launch of the product. These Super-Creators will have additional incentives to provide content on a regular basis, drive audience and awareness of the platform until global platform milestones have been met.

When selecting initial Creators to reach out to, Verasity will be targeting Creators and content genres with demographics that have a higher propensity to be early technology adopters and future advocates of the economy and ecosystem.

Aside from creating initial educational content e.g. how to earn, spend and interact with both VERA and the Verasity platform, key influencers will be targeted to upload their regular high-quality content to build out the video library. A second aspect will be utilizing non-creator Influencers to grow the platform through referral sign-ups, sharing links to generate views and other incentives.

Advocate Scale

After initial uptake, the next stage is to build a stable advocate base for the platform. At this scale, regular transactions will take place and the velocity of money in the Verasity economy will begin to gain parity with promotional activities in generating earned VERA.

Thanks to educational content and activities undertaken during the launch phase, early adopters will be familiar with the system and will begin to amplify social marketing and promotion undertaken by Verasity.

As the economy and value exchange grows, more Creators will join the platform as the monetization opportunities are proven. Larger Creators will look to move to Verasity, along with their existing audiences.

During this phase of growth, Verasity will focus promotional activities and incentives in three areas:

- 1. Increasing awareness and utilization of community engagement features; such as comments, the Channel Stake Marketplace and feedback systems.
- 2. Grow content across multiple genres, specifically content verticals which have limited overlap with existing demographics and that are under represented on the platform.
- 3. Brand awareness campaigns across traditional marketing channels.

The goal during this phase of growth is to increase user familiarity with the platform, emotional investment within the community and encourage a wider demographic to engage with VERA. Emerging markets will play a significant role in the later stages of growth where Verasity enables seamless access to content that is otherwise difficult to access or monetize. As usage of the platform increases, Verasity will have the facility to sustainably increase promotional activities due to the value within the economy.

Mainstream Usage

With a large and engaged user base established by this phase, the velocity of money in the Verasity economy will be fueling the majority of new VERA creation. Through previous promotion of the Channel Stake Marketplace and community features, both the economy and ecosystem will have established long-term interest to users. With a scaled and proven monetization model for content, the primary growth goal for Verasity will now be to onboard large-scale publishers with a video offering who are currently struggling with both expensive and inefficient platforms. These could be global publishers such as The New York Times, CNBC, VICE, etc. Key markets would also be traditional pay per view content within sports and film as well as subscription-based broadcasting.

In addition to large scale publishers, significant marketing and development resources will be applied to nurturing AAA content that is growing within the Verasity Channel Stake Marketplace. Whereas traditional video platforms are heavily investing in original content to grow users, the Verasity economy and Channel Stake Marketplace will allow a decentralized version of premium original content. This allows the community itself to fuel the growth of top tier content alongside traditional media companies.

The Verasity protocols could be adapted and integrated into existing player technology. This would enable existing video platforms and large-scale publishers to sell digital content to their users using VERA. In turn this would guarantee mainstream adoption and viewers using VERA as a single payment method for digital content across the internet.

Verasity Business Analysis

There are two major components to the Verasity business expansion. We must look at it from the perspective of the Verasity Application services we build on top of the Verasity vDaf platform, and then from the perspective of addressing the adoption of vDaf with the rest of the online video industry.

In estimating Verasity video sharing service adoption, we have focused on the following key metrics:

1. The number of content creators leveraging the Verasity platform

- 2. The number of videos uploaded to the Verasity platform by content creators
- 3. The number of views of videos on the Verasity platform

In years 1-3, we expect the number of content creators to increase by nearly 700% annually with a goal of over 12,500 video content creators and publishers on the platform by year 4. If each content creator uploads only 1 video per week, the result is nearly 400,000 videos on the platform by year 3. The total number of views of those videos is expected to be nearly 500 million by year 3 (approximately 1000 views per video) and increase to 1.2 billion video views by year 4.

We have modelled the growth of the business and projected platform adoption over a 10-year period with a targeted break even point of year 3-4. From there we have conservatively estimated the Verasity market share relative to some of the prominent online video sharing platforms. Based on our forecasts, Verasity will need to reach approximately 60 million visits per month in order to reach a breakeven point. To put this scale in context, a specialist video platform such as Twitch.tv receives around 800 million visits per month and YouTube generates over 21 billion visits per month. To reach break even, Verasity would need to reach a scale of 7.5% of a specialist video platform such as Twitch or just 0.28% the size of YouTube.

Unlike a traditional platform such as YouTube which generates revenue from advertising, Verasity's multiple monetization methods provide additional revenue options for video content creators and publishers.

This provides 3 distinct benefits for Verasity:

- 1. On-boarding content creators is easier as more types of content are commercially viable to run on the platform such as premium content and educational content in addition to the normal viral videos.
- 2. Due to more types of content becoming commercially viable on Verasity, a larger demographic of users can be attracted to the platform as viewers.
- 3. As content is directly monetized (via donations, PPV, subscriptions etc), Verasity is able to charge a significantly lower fee than existing platforms which in turn results in far higher revenue for content creators and publishers.

From a cost perspective, specifically in marketing costs related to content acquisition, as well as social and digital marketing, we expect the costs to decline significantly over time as the platform gains market traction. After the first year we expect these costs to decrease by 50% and another 40% the following year. The reasoning for this expected drop in marketing costs is fundamentally due to the platform generating organic audience growth through the growth of the content library once a critical mass has been reached. We expect this critical mass to be achieved during year 3 and lead to break even in year 3-4.

Verasity.tv Video Sharing Platform Growth Strategy

The growth of the Verasity.tv portal will be focused upon building a solid base of content creators and publishers in order to facilitate the growth of the video library and in turn the potential viewer base. Attracting content creators and publishers will consist of multiple phases, as detailed below.

Phase 1: Initial use of VeraPlayer

We have already begun this step by using our ICO as a method to get VeraPlayer embedded within various ICO Listing sites. VeraPlayer is already running on ICOBench, ICOBazaar, CryptoSlate, ICOBuffer, ICOStreet, Toptokensales, ICOnomat and Coincodex with more being added regularly. This is helping users and ICO enthusiasts become familiar with VeraPlayer.

As part of the Verasity ICO marketing campaign, we conducted an airdrop through the video player itself where users were able to earn tokens by watching our intro videos. As part of the player rollout, we will be implementing a feature that will allow other ICO's to run their own airdrop using VeraPlayer. This will begin phase 2 of the launch...

Phase 2: Crypto-audience

Providing functionality for other ICO's to run airdrops through our VeraPlayer, we start to build additional awareness of how our ecosystem and technology can be used to drive new routes to monetizing video and for viewers to earn while engaging with content. Alongside other ICOs using VeraPlayer, with the launch of Verasity.tv and our own video sharing platform we will look to incentivise and on-board crypto specific creators. This initial demographic of creators will be able to make use of the Pay-per-view and donation features of Verasity to help monetize specialist video content such as trading analysis, ICO reviews and educational content.

Attracting crypto-audiences during the beta launch of the platform will also enable us to fine tune some of the more complex aspects of the platform such as the Spark Marketplace and Verafiers ready for more mainstream launch.

Phase 3: Early adopters

Through partnerships we have already established, Verasity will have access to a large library of high quality video content across a range of different genres including video games, fitness, fashion & beauty, DIY, technology, arts & crafts, cooking and automotive. This initial library of evergreen content will provide the foundation of content to help mainstream users and a broad demographic of users explore Verasity's features and supplement new creators who start on-boarding their new content.

During this phase of growth, we plan to utilize reserved VERA to kick-start the economy by providing additional incentives for new content creators as well as viewers for using the platform. This will be complemented with traditional marketing across social media, influencers and content marketing.

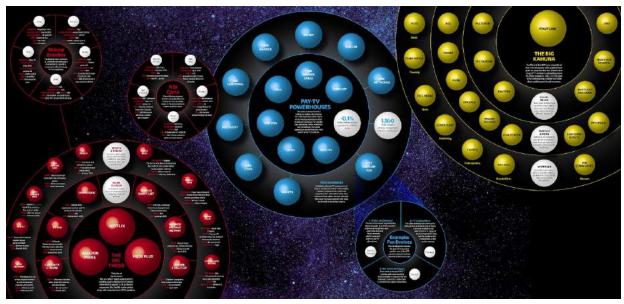
Phase 4: Growing specific vertices

As Verasity.tv grows, we anticipate trends beginning to form in the types of content genres that generate the most engagement. As these specific content verticals grow, we will tailor promotion, content acquisition and community building around these hubs to grow long term investment in these areas. A key part to this long term growth will be through promotion and incentivisation for both content creators and users to engage with the Spark Marketplace. Through the Spark Marketplace, content and channel growth can be accelerated and complemented by increased brand advocacy from the channels backers.

During phase 4, verasity.tv will continue to grow new content verticals as a way to reach new audience demographics. This staggered roll-out of content enables verasity to grow quickly by utilizing complimentary content genres that enable audience overlap and growth (e.g. eSports audiences have a greater affinity for technology content as well).

vDaf (Verasity Decentralized Application Framework) adoption:

This phase actually happens in parallel to the audience building of Verasity.TV. Verasity will offer the vDaf blockchain enablement components to global online video offerings. As you can see in the graphic, the premium online video space has exploded.



https://variety.com/2015/digital/news/ott-map-video-ecosystem-1201480930/

Although the OTT industry has seen significant consolidation in the past few years, with major players such as YouTube, Hulu, Netflix, and Amazon Prime Video capturing significant market share, there is still massive fragmentation both in the platforms powering OTT as well as in content availability and device/platform support. Of the independent service providers, many initially built their own OTT video delivery platforms, but most are now leveraging 3rd party solutions, specifically ones that address increasingly complex technical requirements, as well as business level needs such as monetization. Online video platforms like TVB MyTv, YuppTv, Digiturk Play, and Dish India are addressing global audiences. Some of these global offerings require a borderless currency to remove fiat intermediaries that are taking up to 70% of margin converting back to their local currencies. Verasity will bring a commerce platform to market that removes these intermediaries and removes the complexity of managing a token economy that needs to support commercial micro-transactions. These offerings will also be able to leverage PoVTM to get rid of fake content views making their advertising revenue chains more efficient.

The sales cycles for existing OTT service adoption tends to take a little bit longer, as it takes time for these large organizations to consider, and then integrate the technology. We will begin marketing to this market segment immediately post launch. The strategy will be to pick a few "friendly" operators that we can work with to ensure we have addressed the market needs in the first half of 2019. Then target a more aggressive go to market strategy in Q4 2019.

Similar Blockchain Projects

Basic Attention Token - <u>basicattentiontoken.org/</u>

Basic Attention Token (BAT) is building a decentralized, transparent digital ad exchange based on Ethereum Blockchain. This uses the Brave Browser to insert adblock and cut out adtech. This enables a creation of a new economy where users buy BAT to pay Publishers based on attention (or time spent on site). Advertisers can buy BAT to be able to circumvent the browser adblock, where value goes directly to the publisher.

BAT launched a token sale in May 2017 and raised \$35m in 30 seconds. In January 2018 they had a market cap of \$864m claimed adoption of 8000 Publishers verified, including 6000 YouTube Creators with an audience of 100m¹³. Users are required to download and utilize a new browser. Google's Chrome have recently released an updated version including a built in ad filter. Brave's solution acts to block advertising revenue to insert their own revenue or direct payment. This may breach the terms and conditions of some Publishers or Platforms.¹⁴

Steem - steem.io

Steem, is a social media platform based on its own Blockchain to support distribution and rewards for content publishing. Contributors publish onto the platform and users upvote content, which generates Steem for the Creator. The platform is governed by its users which includes discouraging spammers, copyright and illegal content. Today Steemit.com has over 34m users according to Similarweb and Steem is valued at over \$5 a coin. Steem have paid out \$22.8m in rewards to date and has a market cap of \$1.2B as of January 2018.

Props - propsproject.com

Props by YouNow is "the next generation platform that leverages the power of cryptoeconomics & participation in digital media". YouNow is an existing live streaming site so have an existing team and impressive investor list. Props is based on Ethereum Blockchain, and aims to decentralize digital media. It has a currency (PROPS) but also Coins, which are used for micro transactions, but not hosted on the Blockchain (not a cryptocurrency). The technology use case today seems to be designed for mobile applications with 'many to many' live streaming solutions.

Flixxo - www.flixxo.com

Flixxo offers a P2P, decentralized video platform which aims to give more power and revenue back to the creators. It is a merge of BitTorrent and Blockchain. Videos are distributed using the peer-to-peer network and viewers use FLIXX tokens based on Ethereum to watch. FLIXX is earned by being a seeder on the network and will offer CPU, storage and energy to support the network. The team are based in Argentina and the network requires users to download software to participate. In November 2017 Flixxio raised

https://medium.com/@AttentionToken/brave-verified-publishers-double-in-one-week-with-ongoing-1-million-crypto-token-giveaway-887df451c9d0

¹³

¹⁴ http://www.telegraph.co.uk/technology/2017/12/29/google-pulls-youtube-amazon-tv-boxes-early-feud-continues/

\$12m in an ICO and the price went on to reach \$68m market cap in January 2017. No product is currently live.

How Is Verasity Different?

Verasity is the only solution that combines all of the following proposed offerings:

Decentralized Proprietary Blockchain - Avoids building on existing blockchains that could be subject to congestion due to multiple use cases and risk of future forks or changes in the network that risk Verasity economy. Many other similar projects are all built on Ethereum, which has technological limitations to scalability. To mitigate risk Verasity is developing its own proprietary Blockchain solution.

Proof of View (PoV[™]) - With views dictating everything from earnings, search rankings and even success, it is essential that they cannot be manipulated or changed. Verasity's unique 'Proof of View' technology ensures all participants in the economy and ecosystem are playing fair.

Watch and earn mechanic - Verasity rewards user participation by allowing them to earn VERA whilst watching videos. Users can also opt-in to watch advertising and be paid for their attention by advertisers.

Centralized Video Distribution - Peer to Peer networks come with many pitfalls. Without the ability to scale, or offer on par user experience to existing video playback quality will result in users leaving the platform which is bad for the overall economy. Verasity's Player offers high-quality playback, efficiency, and has been tested at scale. 99% of users of all decentralized economies rely on external centralized tools such as email and web browsers. Verasity utilizes an online video platform as a tool however the Verasity economy can scale to utilize other platforms in the future.

VeraSparks and Spark Marketplace - Financing growth can be both slow and challenging regardless of whether it is for a new camera or to fund a feature film. VeraSparks allow Creators and Publishers a new way to directly finance their growth beyond the typical cosmetic rewards and further enhances the bond between audiences and their favourite Creators.

Multiple monetization options - To reach mass adoption, video sharing platforms must be accessible to as many types of content and viewers as possible. With multiple options on how to monetize content, both Creators and their audiences are able to flourish and contribute to the economy and ecosystem.

Legal Approach

Due to concerns around unpredictability and regulation (or lack of in many markets) the team have treated the legal and administrative elements to setting up the project and raising funds very seriously. Verasity appointed a legal officer to sit on the advisory team and work closely with the rest of the Verasity Foundation advising best practices. Verasity appointed Ogier, a well known and highly reputable legal firm that has a dedicated Digital, Blockchain and Fintech team to advise Verasity on the structure of Verasity Foundation and certain regulatory and other matters pertaining to Cayman Islands laws. Verasity has also appointed Pitmans, a well known and highly reputable legal firm in the United Kingdom with respect to certain regulatory and other matters. In order to comply with present and/or future regulation, Verasity Foundation is opting to apply the necessary KYC/AML and accredited investor procedures during the token sale and to comply with all applicable regulations including necessary sanctions and PEP checks.

Governance and Role of the Foundation

Verasity Foundation will be responsible for ensuring the vision of the White Paper is adhered to, funding the development of the platform and funding the support growth within the community. Verasity Foundation will be conducting the initial sale of VERA and will thereafter be monitoring Verasity to ensure the Verasity Platform is developed in accordance with the principles set out in this White Paper. Proceeds raised from the sale of VERA will remain in the Foundation and be unlocked to VeraTech Ltd based on predefined milestones agreed upon and validated by the Foundation. Verasity's general counsel and CEO are Supervisors of the Foundation and will validate milestones as well as the use of funds from the ICO. Quarterly reports will be published to the community.

Verasity Foundation will provide quarterly reports to update the contributors to the project regarding the roadmap updates. This will include current developments, forecast vs. current and latest updates. Verasity management will not be able to buy or sell VERA during the 20 days prior to the announcement of the quarterly management reports to avoid insider trading. Verasity management lock up period is 18 months. Private investor lock up periods is 9 months.

All transactions on the platform will be implemented on the Verasity Blockchain. The

Smart Contract will be audited by a third party to increase security.

Verasity Foundation will make public its GitHub account which will provide:

- Smart Contract and Audit (will be also available on Etherscan)
- White Paper
- VERA Blockchain code
- Full wallet code (Verafier app for various platforms)
- Proof-of-View (PoV[™]) DB parsing code
- Proof-of-View (PoV™) hash checker / hash generator

Verasity Foundation, Token Holders and Verasity

Verasity Foundation is a foundation company incorporated in the Cayman Islands under the Companies Law (Revised) and registered as a foundation company pursuant to the Foundation Companies Law, 2017. Verasity Foundation's management will be carried out by its directors. Holders of tokens are not entitled to any shares or property of the Verasity Foundation and have no rights to appoint or remove the board of directors of the Verasity Foundation.

Other than VERA generated and sold which will have utility on the Platform, all Verasity products, operations, platform maintenance and improvements, platform technology and development is provided by the operating company, VeraTech Ltd. Physically, most of the team is located in the United Kingdom and Poland.

To mitigate investment risk in Verasity, prior financing is in place and the entire team and infrastructure funded to date. Current funding without additional Token Sale proceeds could take the project to protocol completion at a slower pace to the current roadmap. The risk would not be completion but rather scaling the economy at the necessary rate to achieve sustainability.

Verasity Foundation will endeavour to conserve the value of the Token Sale proceeds and attempt to limit risks associated with unstable cryptocurrency market prices. Verasity Foundation will attempt to achieve this objective by exchanging the proceeds of the Token Sale into either fiat currencies or other assets with a history of price stability.

The Cayman Islands is a well-known and established jurisdiction in the international financial marketplace due to its stable and predictable political and legal framework, as well as its tax neutral status for international transactions. Verasity believes a Cayman domicile for the Verasity Foundation will provide for a long term period of stability. The Verasity Foundation will pay zero taxes on the transactions of the Verasity Economy. The competent court for litigation will be the courts of The Cayman Islands.

Preliminary Disclosures

The digital tokens described in this White Paper may only be used for enabling transactions associated with viewing digital content through the Verasity Platform, and such tokens have no intrinsic value and may not be redeemed except by a Content Creator in payment for viewership of his or her work product through the Verasity Platform.

The acquisition of VERA involves a high degree of risk. Before acquiring VERA, it is recommended that each purchaser conduct their own careful examination of all relevant information and risks (including as set forth below and in additional documentation associated with the sale of VERA). If any of the following risks actually occurs, the Verasity Platform and VERA may be materially and adversely affected, including all VERA being rendered worthless or unusable.

While tokens may be traded through one or more cryptocurrency exchanges, there is no guarantee of value, and the token may be delisted at any time that it does not meet the listing requirements of the exchange. The cryptocurrency token market is immature, and there are numerous risks that threaten the entire category, including but not limited to regulatory risk, the potential collapse of Ethereum as a cryptocurrency, loss of the password key that enables access to a digital wallet, and the potential for bad actors to attack and steal either the content on Verasity or the contents of the digital wallets that belong to the members of the Verasity

community, owners and its viewers.

Full Risks and Legal Disclosures

1 IMPORTANT NOTICE

PLEASE READ THIS SECTION CAREFULLY. YOU SHOULD CONSULT YOUR LEGAL, FINANCIAL, TAX, AND OTHER PROFESSIONAL ADVISOR(S) BEFORE TAKING ANY ACTION IN CONNECTION WITH THIS WHITE PAPER.

This document (the White Paper) is intended to present general information regarding the planned Verasity System. In connection with the development of the System, sales of blockchain tokens may take place in one or more proposed generation and sale events of VERA (Tokens) undertaken by the Verasity Foundation Company Limited (the Token Generator) (collectively, the Token Generation). Certain terms of this document pertain to potential purchasers (each a Purchaser) in any such sale(s).

1.1 Reliance

Any Tokens are offered solely on the basis of the information contained in the terms and conditions of purchase and sale (**Terms and Conditions**). Potential Purchasers should disregard, and not rely upon, any other information or representations given or made by any dealer, broker or other person. No person is authorised to give any information or to make any representations in connection with any offering of VERA Tokens apart from those contained in the Terms and Conditions. A potential Purchaser to whom such information or representations are given or made must not rely on them as having been authorised by the Token Generator or any of its affiliates or subsidiaries.

Statements in the White Paper are generally based on the law and practice in the Cayman Islands, with certain specific statements based on the law and practice of the jurisdictions explicitly-mentioned, in each case current at the date the White Paper was issued. Those statements are therefore subject to change should the corresponding law or practice change. Under no circumstance does the delivery of the White Paper or the sale of Tokens imply or represent that the affairs of the Token Generator have not changed since the date of the White Paper.

1.2 Purchaser responsibility

Nothing contained in the White Paper is or may be relied upon as a promise, representation or undertaking as to the future performance or policies of the Token Generator. The Token Generator does not make representations or warranties of any kind with respect to the economic return from, or the tax consequences of a purchase of Tokens. Prospective Purchasers should carefully review the whole of the token sale Terms and Conditions provided along with any token sale offer. They should also consult with their legal, tax and financial advisors in relation to the following: (i) the legal and regulatory requirements within their own countries for purchasing, holding and disposing of Tokens; (ii) any foreign exchange restrictions to which they may be subject in their own countries in relation to purchasing, holding or disposing of Tokens; and (iii) the legal, tax, financial and other consequences of subscribing for, purchasing, holding or disposing of Tokens.

This White Paper is not composed in accordance with, and is not subject to, laws or regulations of any jurisdiction which are designed to protect investors. To the maximum extent permitted by applicable law, Token Generator expressly disclaims and shall not be liable for any and all responsibility for any direct or any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with (i) Purchaser's acceptance of or reliance on any information contained in the White Paper, (ii) any error, omission or inaccuracy in any such information or (iii) any action resulting therefrom.

1.3 Distribution and selling restrictions

The distribution of the White Paper and the offering or purchase of Tokens may be restricted in certain jurisdictions. The White Paper is not intended as part of any offer, sale or distribution under the laws of any jurisdiction governing the offer or sale of securities.

The receipt of the White Paper or the accompanying Terms and Conditions does not constitute an invitation to a recipient to subscribe for Tokens in a jurisdiction where it is necessary to comply with registration or any other legal requirement to make that invitation, or the use of the Terms and Conditions, lawful. No such recipient may treat the White Paper or the accompanying Terms and Conditions as an invitation to subscribe for Tokens, nor may such recipient use the Terms and Conditions. More particularly, the White Paper does not constitute an offer or solicitation:

- by anyone in a jurisdiction in which such offer or solicitation is not lawful or in which the person making such offer or solicitation is not qualified to do so; or
- to anyone to whom it is unlawful to make such offer or solicitation.

It is the responsibility of every person in possession of the White Paper and every person wishing to apply to purchase Tokens to inform himself, herself or itself of, and to observe all applicable laws and regulations of, any relevant jurisdiction.

1.4 Forward looking information

All statements, estimates and financial information contained in the White Paper, made in any press releases or in any place accessible by the public and oral statements that may be made by Token Generator that are not statements of historical fact, constitute "forward-looking statements". Some of these statements can be identified by forward-looking terms such as "aim", "target", "anticipate", "believe", "could", "estimate", "expect", "if", "intend", "may", "plan", "possible", "probable", "project", "should", "would", "will" or other similar terms. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual events or results, performance or achievements to differ materially from the estimates or the results implied or expressed in such forward-looking statements.

Further, the Token Generator disclaims any responsibility to update any of those forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments, events or circumstances, even if new information becomes available or other events occur in the future.

2 DISCLOSURE SCHEDULE

The acquisition of Tokens involves a high degree of risk. Before acquiring Tokens, it is recommended that each Purchaser conduct its own careful examination of all relevant information and risks about the Token Generator, Verasity Platform and Tokens and, specifically, the disclosures and risk factors set out below. If any of the following risks actually occurs, the Verasity Platform, Token and Purchaser's Tokens may be materially and adversely affected, including the Purchaser's Token being rendered worthless or unusable.

3 Disclosures regarding the White Paper

3.1 Accuracy of information, no consent of parties referenced in White Paper

This White Paper includes market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information.

Save for the Token Generator and its respective directors, executive officers and employees, no person has provided his or her consent to the inclusion of his or her name and/or other information attributed or perceived to be attributed to such person in connection therewith in the White Paper and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information by such person and such persons shall not be obliged to provide any updates on the same.

Neither the Token Generator nor VeraTech Ltd (**Verasity**) have conducted any independent review of the information extracted from third party sources, verified the accuracy or completeness of such information or ascertained the underlying economic assumptions relied upon therein. Consequently, neither Token Generator nor its directors, executive officers and employees acting on its behalf makes any representation or warranty as to the accuracy or completeness of such information and shall not be obliged to provide any updates on the same

3.2 Terms used

To facilitate a better understanding of Tokens being offered for purchase by the Token Generator, and the businesses and operations of the Token Generator, certain technical terms and abbreviations, as well as, in certain instances, their descriptions, have been used in the White Paper. These descriptions and assigned meanings should not be treated as being definitive of their meanings and may not correspond to standard industry meanings or usage.

Words importing the singular shall, where applicable, include the plural and vice versa and words importing the masculine gender shall, where applicable, include the feminine and neuter genders and vice versa. References to persons shall include corporations.

3.3 Restrictions on distribution and dissemination of White Paper

The distribution or dissemination of the White Paper or any part thereof may be prohibited or restricted by the laws, regulatory requirements and rules of any jurisdiction. In the case where any restriction applies, you are to inform yourself about, and to observe, any restrictions which are applicable to your possession of the White Paper or such part thereof (as the case may be) at your own expense and without liability to the Token Generator.

Persons to whom a copy of the White Paper has been distributed or disseminated, provided access to or who otherwise have the White Paper in their possession shall not circulate it to any other persons, reproduce or otherwise distribute the White Paper or any information contained herein for any purpose whatsoever nor permit or cause the same to occur.

3.4 Language of White Paper

This White Paper may have been prepared in multiple languages. In the event of any inconsistencies between one version and another, the English language version shall prevail.

4 Disclosures regarding Tokens

4.1 Nature of Tokens

(a) Token is a utility token

Tokens are digital utility tokens that afford Token holders to access the Verasity Platform and/or execute certain functions on the Verasity Blockchain. Tokens do not represent a loan to Token Generator nor do they provide Purchaser with any ownership or other interest in or to Token Generator. For greater certainty, the purchase of Tokens does not provide Purchaser with any form of ownership right or other interest in or to Token Generator or Verasity or its present or future assets and revenues, including, but not limited to, any voting, distribution, redemption, liquidation, revenue sharing, proprietary (including all forms of intellectual property), or other financial or legal rights.

4.2 Tokens are non-refundable

Other than instances described in the Terms and Conditions, if any, Token Generator is not obliged to provide Token holders with a refund for any reason, and Token holders will not receive money or other compensation in lieu of a refund. Statements set out in the White Paper are merely expressions of the Token Generator's objectives and desired work plan to achieve those objectives. and no promises of future performance or price are or will be made in respect to Tokens, including no promise of inherent value, and no guarantee that Tokens will hold any particular value.

4.3 Tokens are provided on an "as is" basis

Tokens are provided on "as is" basis. The Token Generator and Verasity and each of their respective directors, officers, employees, shareholders, affiliates and licensors make no representations or warranties of any kind, whether express, implied, statutory or otherwise regarding Tokens, including any warranty of title, merchantability or fitness for a particular purpose or any warranty that Tokens and Verasity Platform will be uninterrupted, error-free or free of harmful components, secure or not otherwise lost or damaged. Except to the extent prohibited by applicable law, the Token Generator and Verasity and each of their respective directors, officers, employees, shareholders, affiliates and licensors disclaim all warranties, including any implied warranties of merchantability, satisfactory quality, fitness for a particular purpose, non-infringement, or quiet enjoyment, and any warranties arising out of any course of dealings, usage or trade.

4.4 Not an offering of securities, commodities or swaps

The sale of Tokens and Tokens themselves are not securities, commodities, swaps on either securities or

commodities, or a financial instrument of any kind. Purchases and sales of Tokens are not subject to the protections of any laws governing those types of financial instruments. This White Paper and all other documents referred to in the White Paper including the Terms and Conditions do not constitute a prospectus or offering document, and are not an offer to sell, nor the solicitation of an offer to buy an investment, a security, commodity, or a swap on either a security or commodity.

4.5 Non-Investment purposes

Purchaser acknowledges and agrees that Purchaser is not purchasing Tokens for purposes of investment, speculation, as some type of arbitrage strategy, for immediate resale or other financial purposes. Tokens are not designed for investment purposes and should not be considered as a type of investment.

4.6 Tokens may have no value

4.7 Force majeure

The Token Generation and the performance of the Token Generator's activities set out in White Paper development roadmap may be interrupted, suspended or delayed due to force majeure events. For the purposes of the White Paper, a force majeure event shall mean any extraordinary event or circumstances which could not be prevented by Token Generator and shall include: hardware, software or other utility failures, changes in market forces or technology, software or smart contract bugs, changes in blockchain-related protocols, acts of nature, wars, armed conflicts, mass civil disorders, industrial actions, epidemics, lockouts, slowdowns, prolonged shortage or other failures of energy supplies or communication service, acts of municipal, state or federal governmental agencies or other circumstances beyond Token Generator's control, which were not in existence at the time of Token Generation.

Purchaser understands and agrees that Token Generator shall not be liable and disclaims all liability to

4.8 Insurance

Unlike bank accounts or accounts at financial institutions, Tokens are uninsured unless you specifically obtain private insurance to insure them. Thus, in the event of loss or loss of utility value, there is no public insurer or private insurance arranged by Token Generator to offer recourse to Purchaser.

5 Governmental disclosures

Purchaser in connection with a force majeure event.

5.1 Risk of unfavorable regulatory action in one or more jurisdictions

The regulatory status of cryptographic tokens, digital assets, and blockchain technology is undeveloped, varies significantly among jurisdictions and is subject to significant uncertainty. It is possible that certain jurisdictions may adopt laws, regulations, policies or rules directly or indirectly affecting the Bitcoin and Ethereum network, or restricting the right to acquire, own, hold, sell, convert, trade, or use Tokens. Developments in laws, regulations, policies or rules may alter the nature of the operation of the blockchain network upon which Tokens are dependent.

There can be no assurance that governmental authorities will not examine the operations of the Token Generator and Verasity and/or pursue enforcement actions against the Token Generator and Verasity. All of this may subject the Token Generator and Verasity to judgments, settlements, fines or penalties, or cause the Token Generator and Verasity to restructure their operations and activities or to cease offering certain products or services, all of which could harm the Token Generator and Verasity's reputation or lead to higher operational costs, which may, in turn, have a material adverse effect on Tokens and/or the development of the Verasity Platform.

5.2 Purchaser bears responsibility of legal categorisation

There is a risk that Tokens might be considered a security in certain jurisdictions, or that they might be considered to be a security in the future. The Token Generator does not provide any warranty or guarantee as to whether Tokens will be a security in the jurisdiction of the Purchaser. Each Purchaser will bear all consequences of Tokens being considered a security in their respective jurisdiction. Every Purchaser is responsible to confirm if the acquisition and/or disposal of Tokens is legal in its relevant jurisdiction, and each Purchaser undertakes not to use Tokens in any jurisdiction where doing so would be unlawful. If a Purchaser establishes that the purchase or use of Tokens is not legal in its jurisdiction, it should not acquire Tokens and immediately stop using or possessing Tokens.

Acquiring Tokens in exchange for cryptocurrencies will most likely continue to be scrutinized by various regulatory bodies around the world, which may impact the usage of Tokens. The legal ability of the Token

Generator to provide or support Tokens in some jurisdictions may be eliminated by future regulation or legal actions. In the event the Token Generator determines that the purchase or usage of Tokens is illegal

in a certain jurisdiction, the Token Generator may cease operations in that jurisdiction, or adjust Tokens or the Verasity Platform in a way to comply with applicable law.

5.3 Purchaser bears responsibility for complying with transfer restrictions

Tokens may be placed on third-party exchanges, giving future purchasers and users an opportunity to openly buy Tokens. A user seeking to enter the Verasity Platform following the Token Generation will have to buy Tokens on such exchanges. Conversely, Tokens may be sold on such exchanges if the holder of Tokens would like to exit the Verasity Platform ecosystem. Existing laws on the circulation of securities in certain countries, such as the United States of America, Canada and Singapore, may prohibit the sale of Tokens to the residents of those countries. When buying Tokens, Purchaser should be aware of the restrictions on their subsequent sale.

6 General security risks

6.1 Risk of theft and hacking

Token generation events and initial coin offerings are often targeted by hackers and bad actors. Hackers may attempt to interfere with the Purchaser's private key storage device or digital wallet Digital Wallet, the Verasity Blockchain or the availability of Tokens in any number of ways, including without limitation denial of service attacks, Sybil attacks, spoofing, smurfing, malware attacks, or consensus-based attacks. Any such attack may result in theft of Purchaser's Tokens.

6.2 Private keys

Tokens purchased by Purchaser may be held by Purchaser in Purchaser's digital wallet or vault, which requires a private key, or a combination of private keys, for access. Accordingly, loss of requisite private key(s) associated with Purchaser's digital wallet or vault storing Tokens will result in loss of such Tokens. Moreover, any third party that gains access to such private key(s), including by gaining access to login credentials of a hosted wallet or vault service Purchaser uses, may be able to misappropriate Purchaser's Tokens. Token Generator is not responsible for any such losses.

6.3 Exchange risks

If Purchaser sends cryptocurrencies to the Token Generator from an exchange or an account that Purchaser does not control, Tokens will be allocated to the account that has sent such cryptocurrency; therefore, Purchaser may never receive or be able to recover Purchaser's Tokens. Furthermore, if Purchaser chooses to maintain or hold Tokens through a cryptocurrency exchange or other third party, Purchaser's Tokens may be stolen or lost.

6.4 Risk of incompatible wallet services

The wallet or wallet service provider used for the storage of Tokens has to be technically compatible with Tokens. The failure to assure this may result in the Purchaser not being able to gain access to its Tokens.

6.5 Risk of weaknesses or exploitable breakthroughs in the field of cryptography

Advances in cryptography, or other technical advances such as the development of quantum computers, could present risks to cryptocurrencies, Ethereum and Tokens, which could result in the theft or loss of Tokens.

6.6 Internet transmission risks

There are risks associated with using Tokens including, but not limited to, the failure of hardware, software, and internet connections. The Token Generator shall not be responsible for any communication failures, disruptions, errors, distortions or delays you may experience when using the Verasity Platform and Tokens, howsoever caused. Transactions in cryptocurrencies may be irreversible, and, accordingly, losses due to fraudulent or accidental transactions may not be recoverable. cryptocurrency transactions are deemed to be made when recorded on a public ledger, which is not necessarily the date or time when the transaction is initiated.

7 Verasity Platform disclosures

7.1 No guarantee that Verasity Blockchain will be developed

Purchaser acknowledges, understands and agrees that Purchaser should not expect and there is no guarantee or representation or warranty by Token Generator that: (a) the Verasity Platform will ever be adopted; (b) the Verasity Platform will be adopted as developed by Token Generator and not in a different

or modified form; (c) a blockchain utilizing or adopting the Token Generator will ever be launched; and (d) a blockchain will ever be launched with or without changes to the Verasity Platform and with or without a distribution matching the fixed balances of the initial tokens distributed under the Token Sale.

7.2 Risks associated with the Verasity and Ethereum blockchains and associated software and/or infrastructure.

(a) Malfunctions

The initial iteration of the Tokens are based on the Ethereum blockchain. As such, any malfunction, unintended function or unexpected functioning of the Ethereum protocol may cause Tokens and/or the Verasity Platform to malfunction or function in an unexpected or unintended manner.

(b) Bugs and weaknesses

The Ethereum blockchain rests on open source software, and accordingly there is the risk that the token smart contract pertaining to the initial iteration of Tokens may contain intentional or unintentional bugs or weaknesses which may negatively affect Tokens or result in the loss or theft of Tokens or the loss of ability to access or control Tokens. In the event of such a software bug or weakness, there may be no remedy and Token holders are not guaranteed any remedy, refund or compensation.

(c) Delays and congestions

On the Ethereum blockchain (which is used for the Token Sale) timing of block production is determined by proof of work so block production can occur at random times. For example, Ether contributed to the Verasity Blockchain in the final seconds of a distribution period may not get included for that period. Purchaser acknowledges and understands that the Ethereum blockchain may not include the Purchaser's transaction at the time Purchaser expects and Purchaser may not receive Tokens the same day Purchaser sends Ether. The Ethereum blockchain is prone to periodic congestion during which transactions can be delayed or lost. Individuals may also intentionally spam the Ethereum network in an attempt to gain an advantage in purchasing cryptographic tokens. Purchaser acknowledges and understands that Ethereum block producers may not include Purchaser's transaction when Purchaser wants or Purchaser's transaction may not be included at all.

7.3 Irreversible nature of blockchain transactions

Transactions involving Tokens that have been verified, and thus recorded as a block on the blockchain, generally cannot be undone. Even if the transaction turns out to have been in error, or due to theft of a user's Token, the transaction is not reversible. Further, at this time, there is no governmental, regulatory, investigative, or prosecutorial authority or mechanism through which to bring an action or complaint regarding missing or stolen cryptocurrencies. Consequently, the Token Generator may be unable to replace missing Tokens or seek reimbursement for any erroneous transfer or theft of Tokens.

7.4 Amendments to protocol

The development team and administrators of the source code for Ethereum blockchain or the Verasity Blockchain could propose amendments to such network's protocols and software that, if accepted and authorized, or not accepted, by the network community, could adversely affect the supply, security, value, or market share of Tokens.

7.5 Risk of mining attacks

As with other decentralized cryptocurrencies, the Ethereum blockchain, which is used for the initial tokens sold under the Token Sale, is susceptible to mining attacks, including but not limited to double-spend attacks, majority mining power attacks, "selfish-mining" attacks and race condition attacks. Any successful attack presents a risk to Tokens, including the expected proper execution and sequencing of Tokens and Ethereum contract computations in general. Despite the efforts of the Token Generator and Ethereum Foundation, the risk of known or novel mining attacks exists. Mining attacks, as described above, may also target other blockchain networks, with which Tokens interact with and consequently Tokens may be impacted also in that way to the extent described above.

8 Token Generator disclosures

Because Tokens confer no governance rights of any kind with respect to the Token Generator, all decisions involving the Token Generator's products or services within the platform or Token Generator itself will be made by Token Generator at its sole discretion. These decisions could adversely affect the platform and the utility of any Token you own.

8.1 Dependence on management team

The ability of the Verasity Platform project team, which is responsible for maintaining competitive position of the Verasity Platform, is dependent to a large degree on the services of a senior management team. The loss or diminution in the services of members of such senior management team or an inability to attract, retain and maintain additional senior management personnel could have a material adverse effect on the Verasity Platform. Competition for personnel with relevant expertise is intense due to the small number of qualified individuals, and this competition may seriously affect the Token Generator's ability to retain its existing senior management and attract additional qualified senior management personnel, which could have a significant adverse impact on the Verasity Platform.

8.2 Risks related to reliance on third parties

Even if completed, the Verasity Platform will rely, in whole or partly, on third-parties to adopt and implement it and to continue to develop, supply, and otherwise support it. There is no assurance or guarantee that those third-parties will complete their work, properly carry out their obligations, or otherwise meet anyone's needs, any of which might have a material adverse effect on the Verasity Platform.

8.3 Insufficient interest in the Verasity Platform and Tokens

It is possible that the Verasity Platform or Tokens will not be used by a large number of individuals, businesses and organizations and that there will be limited public interest in the creation and development of its functionalities. Such a lack of interest could impact the development of the Verasity Platform.

8.4 Verasity Platform development risks

The development of the Verasity Platform and/or Verasity Blockchain may be abandoned for a number of reasons, including lack of interest from the public, insufficient funding, insufficient commercial success or prospects or departure of key personnel.

8.5 Changes to Verasity Platform

The Verasity Platform is still under development and may undergo significant changes over time. Although the Token Generator and Verasity intend for the Verasity Platform to have the features and specifications set forth in the White Paper, changes to such features and specifications may be made for any number of reasons, any of which may mean that the Verasity Platform does not meet expectations of the Purchaser.

8.6 Other projects

The Platform may give rise to other, alternative projects, promoted by parties that are affiliated or unaffiliated with the Token Generator and Verasity, and such projects may provide no benefit to the Verasity Platform.

8.7 Disclosures relating to conflicts of interest

Any of the Token Generator and Verasity may be engaged in transactions with related parties and conflicts of interest may arise, potentially resulting in the conclusion of transactions on terms not determined by market forces.

9 Other disclosures

Purchases of Tokens should be undertaken only by individuals, entities, or companies that have significant experience with, and understanding of, the usage and intricacies of cryptographic tokens, including Ether, and blockchain based software systems. Purchaser should have a functional understanding of storage and transmission mechanisms associated with other cryptographic tokens. While the Token Generator will be available to assist purchasers of Tokens during the sale, the Token Generator will not be responsible in any way for loss of BTC, ETH or Tokens resulting from actions taken by, or omitted by purchasers. If you do not have such experience or expertise, then you should not purchase Tokens or participate in the sale of Tokens. Cryptographic tokens such as Tokens are a new and untested technology. In addition to the risks included above, there are other risks associated with your purchase, possession and use of Tokens, including unanticipated risks. Such risks may further materialize as unanticipated variations or combinations of the risks discussed above.

Appendix

Decentralization and the rise of Cryptocurrency

Blockchains verify transactions using distributed trusted non-alterable protocols based on cryptographic mathematics, rather than a centralized trusted authority such as Paypal or a bank. It offers the proof that the database (Blockchain) is secured across an unlimited number of computers without a single authority controlling or verifying the authenticity of the data. This allows one internet user to transfer a unique piece of digital property to another internet user in a safe, secure and transparent way, without the need for either party to know or trust the other. This network of distributed trust is a significant advance that will replace much of what we think is the internet now: payments systems, online banking, content management and most aspects of what constitutes a transaction today.

This technology offers vast opportunities and promises to revolutionize many industries. With a blockchain, an unlimited number of users can write permanent entries into a ledger, stored on multiple servers, yet no one person or entity controls that information or can rewrite it. This enables the decentralization of resource management and price allocation with the potential to remove middlemen, increasing the value to the counter-parties.

In 2008 during the financial crisis, Bitcoin was born as the first real use case for blockchain technology in the form of a peer-to-peer digital currency. Since then thousands of new cryptocurrencies have emerged. These technology innovations have also facilitated the creation of Smart Contracts which facilitate the performance and verification of contractual obligations without third party verification. Together these technologies create a scalable, low cost economic ecosystem that allow a wide array of transactions like micropayment gratuities, goods and service purchases, and even advanced concepts like crowdsource funding initiatives, instead of traditional mechanisms like venture capitalists or private equity and banks.

The total value of the cryptocurrency market stands at \$500 billion and there were 21.5 million Blockchain Wallets in Q4 2017¹⁵. We are seeing mass adoption by users and the perceived value of digital tokens evolving quickly. Projects such as Steemit have been leading the way in creating a new type of value exchange between Creators and Readers, in exchange for digital tokens which can be exchanged for fiat currency. The emergence of this technology has paved the way to disrupt existing digital platforms and significantly shift market mechanisms to favor the community rather than large organizations.

Why Verasity uses Servers, not Peer-to-Peer (P2P) Networks

99% of users of all decentralized economies rely on external centralized tools such as email and web browsers. Verasity utilizes an online video platform as a tool however, the Verasity economy can scale to utilize other platforms in the future.

Verasity has chosen an OVP structure utilizing new technology to be able to distribute any library anywhere at any time in high quality.

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Verasity will not require a P2P content delivery network. In order to provide fair access to content, so all Creators and Viewers can exchange value in the platform, content must be distributed equally.

At this time Verasity believes there are fundamental issues with a system reliant on P2P including:

Peer-to-Peer OVP Problems	Centralized Server Solution
Niche or unpopular content may not be viewable. To access content on a P2P network requires that the content be seeded on the network. Unless the content is popular (prior to being on the network), it is unlikely to get many seeds. Without seeds, users will encounter playback issues when trying to access videos.	Centralized servers treat all content equally, allowing all content the opportunity to succeed.
In order to seed content, users are often required to download a standalone app. For content to be seeded, it needs to be stored on the device being used as a peer. Due to browser limitations, it is not normally feasible to seed from a browser alone. The requirement for a standalone application to seed content will reduce the number of potential seeders and the stability of the network.	As a central server hosts all content, users are not required to download a standalone application.
It is extremely challenging to moderate content. Should illegal content be distributed on the platform, it is important that it is able to be removed. Failure to remove illegal content can result in legal action being taken against the platform and may result in the platform being blocked or taken down as a whole.	A central server for content allows the platform to remove content that would put the whole economy and ecosystem at risk of takedown or legal action.
View / monetization permissions on content are difficult to enforce. For effective monetization and control of content, creators and publishers need to be able to maintain the ability to change permissions on their content and in some cases, remove it. With a P2P network, it would be difficult to enforce features such as pay-per-view or subscription based monetization models for creators.	Central servers allow Creators and Publishers to maintain more control over their content. This allows sustainable distribution and monetization of content
It is likely that there would be high levels of latency. While in theory it is possible that a user is closer to a peer than a server, in most real-world situations this would not be the case. Additionally, the network quality and stability of the seed would need to be sufficient to avoid latency and other playback issues.	Central servers are more stable and optimally located to allow distribution on a global basis.

There would often be significant amounts of redundant storage/bandwidth usage. A single file may and would need to be stored / hosted by multiple peers. This means you store the same file multiple times. The hardware storage, electricity / battery consumption and bandwidth use is a huge drain on resources and not sustainable environmentally.	With central servers, there is less duplication of storage and bandwidth usage. Additionally, servers are optimized
Users may not be able to access content easily due to ISP specifics (like NAT) leading to the impossibility of full-scale P2P usage. Many ISPs make customisations to their infrastructure and networks that can lead to either intentional or inadvertent blocking of P2P connections. This could make the platform unusable for many users.	Central servers are able to provide easy access to content for all users globally. This is a proven architecture that provides excellent viewer experience.
Most networks provide lower upload speed, leading to asymmetrical sharing of content. This is especially apparent on mobile connections. Most users would be able to view content (download) faster than they are able to upload. As a result, there would need to be more peers seeding, than users trying to view or there would be severe degradation of playback experience.	Central servers provide the necessary bandwidth to distribute content to users.
Users acting as peers would incur extra cost, especially on mobile networks due to bandwidth usage. Seeding content would require users to upload significant amounts of data to supply the network. Many internet connections have limitations on bandwidth usage with additional charges should they be exceeded. This is especially apparent on mobile connections. These extra costs will limit the number of users willing to seed content.	Central servers manage the cost of distributing content.
Mobile devices have limited storage space and as a result P2P networks are unlikely to work well on mobile devices which are becoming the dominant device used to access content. In order to seed content, peers will need to host the content on their devices. This requires the device to have enough storage available which is limited, especially on mobile devices.	With centralized servers, all content is stored without the need for users to store as much data on their devices.
Seeding content could lead to faster battery drain and slower device speeds, especially on mobile. As seeding content would require a user to maintain a constant data transfer, devices would see battery use increase significantly. Especially on mobile devices, this could lead to users being reluctant to peer and therefore reducing the ability for the network to function.	Central servers provide all hosting, meaning users only need to download content when they want to access it.

Mobile networks can't guarantee any network stability, meaning that any mobile seeder can't be considered as stable and would lead to reloading the same chunk of a file from other seeder if the connection to the first one was lost.

As with above points, mobiles are quickly becoming the main device used globally to access content. As mobile networks are less stable, content may not be effectively distributed and will result in viewers experiencing buffering, latency or even the inability to load content.

As central servers are maintained specifically to distribute content with multiple redundancies, network stability is maintained and as a result, viewer, experience isn't disrupted.

Transcoding would require additional development and resources from users. The more formats needing to be transcoded would further increase this resources requirement.

To allow playback on multiple devices and formats, video must be transcoded. In P2P networks transcoding is not readily available and viewers can only access formats which are seeded.

With central servers, transcoding is handled by specialist hardware that allows quick and efficient processing of content. This allows users to access the content on a variety of devices and formats to suit users, such as low bandwidth environments. Additionally, should new transcode formats be required, it is faster to update systems to accommodate.

Practical Implementation of DPoS

While all users who own tokens are able to vote towards representatives, not all users who are voted for will be elected. As there is a finite number of representatives needed, only some users who receive votes are elected. The users with the highest number of votes are elected (e.g. the top 10 users with the most votes). The number of elected representatives required is decided by the users who vote.

If a user does not allocate their votes to others, those votes are considered to be applied to the user. Votes stay allocated until they are manually changed by the user and at the creation of the next block.

While users are not required to vote, it provides all token holders the ability to influence which users witness the creation of new blocks. This reduces the likelihood of any single user gaining control over who witnesses the creation of new blocks.

Total Addressable Market of Online Video

Online video is intertwined with the online ecosystem and continues to grow. A <u>Cisco report expects 82%</u> of all consumer internet traffic to be video by 2021. The CEO of Cisco predicts that the <u>Internet of Things will create</u> \$19 Trillion in the 2014-2024 period and that the impact of the Internet of Things will be around 5 times greater than the traditional Internet. This suggests that the traditional internet will create \$3.8T in the period or around \$380B per year. As stated above, 82% of the consumer internet traffic will be video by 2021 and therefore the annual value of online video's addressable market will be approximately \$312B.

Technology Licenses

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