
PROOF OF REVIEW



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PROOF OF REVIEW

SENTIVATE (SNTVT) PROJECT ANALYSIS

B- RATING

JULY 2019

ABOUT

Overview

The Sentivate project is a hybrid internet built with the aim to be a viable & realistic replacement for the modern web. The team have identified the current problems faced by the growth of internet users alongside the demands this brings. The aim is to provide a solution which is faster, safer, & more scalable than any solely centralized or decentralized web infrastructure currently available.

Use Case

The main use case for the Sentivate project is intended to solve the issue of network congestion and bandwidth crisis currently faced by the worlds internet users.

Bandwidth Problem

Bandwidth is defined as the amount of data that can be transmitted in a fixed amount of time. The current infrastructure for Bandwidth is facing a looming crisis with the ever-growing number of users on the internet consuming more and more data across a multitude of devices including mobiles, cars, games consoles etc [\[ref\]](#).

The current infrastructure was not designed to be able to handle the growing demands placed on it and the impacts can be both social and economical. It is reported that in 2009, Amazon found every 100ms of latency cost them 1% in sales [\[ref\]](#). A further study in 2012 [\[ref\]](#) shows how a 1-second delay on a page loading could cost Amazon \$1.6 billion in lost sales each year. Fast forward 10 years with the growth of more users with more devices and the problem has only got worse.

User's demands have changed and the requirements of the web have grown. These changes make HTTP a major bottleneck. The HTTP standard itself and TCP are both huge issues.

Large data centres moving copious amounts of data from one end-point to the other have latency and cost issues associated with outdated Internet architecture.

HTTP is especially problematic when users are experiencing low throughput, limited bandwidth, degraded network connectivity, or requiring a near real-time response.

Current Protocol

The current internet infrastructure is built on the HTTP and DNS protocols [\[ref\]](#)

HTTP

User's demands are becoming more and more time-constrained. They expect instant gratification in milliseconds. As technology advances the expectations of the services we use increase. A modern web application utilizes both HTTP and WebSockets. Developers need to push all mission-critical assets to their client in under a second and set up a real-time stream for further live updates. Applications will be opening and closing multiple connections throughout their life cycle.

DNS

HTTP costs companies time and money but that's not the only problem. DNS can drastically speed up the efficiency of connections. Our DIS provides cryptographic parameters in addition to traditional routing information in the form of a verifiable certificate. The DIS can return all this required data at a single point in time to establish a 0-RTT connection. In today's web, a client must have visited a website before it could establish a 0-RTT connection on the next visit. This small feature eliminates drastic amounts of needless packets and bandwidth. Little things on a grand scale have drastic implications on network congestion, performance, overhead, user experience, and profits.

Another long-standing issue with DNS is its lack of trust and lack of consensus. We can see DNS servers go rogue, be used to censor speech, operate unencrypted, and compromising its users. DNS has a multitude of security issues and a drastic lack of features. Sentivate's replacement of DNS is called a Domain Information System. The DIS returns a full cryptographic certificate with all required details to establish a connection in

addition to other secondary certificates if requested. For those looking to dive into the technical issues with DNS, we suggest first reviewing the [Minimalt papers](#).

Sentivate Solution

Sentivate proposes to solve the issues faced by the current internet architecture with the construction of a universal web. The first step in the construction of the Universal Web is to replace HTTP and TCP entirely with Universal Data Stream Protocol (UDSP).

What is UDSP

UDSP is a UDP based low-latency, real-time, bi-directional, encrypted, and reliable Data Transport Protocol. On the Universal Web all communication, streaming, or transferring of any type of data utilizes UDSP. When visiting a site on the Universal Web UDSP is the protocol used instead of HTTP. Specific UDSP client and server modules are required to visit or host a website on the Sentivate Network.

UDSP is the foundation and lifeblood of the Sentivate Network [\[ref\]](#)

Technology behind UDSP

UDSP is capable of dynamic reliability on a connection level, or on a per-request basis which is agreed upon between the involved parties. UDSP enforces encryption which means all UDSP connections are encrypted by default, no exceptions. UDSP supports IPv6, Multiplexing, and Multihoming. UDSP relies on cryptographic key pairs and XChaCha20 to establish a connection.

UDSP prioritizes the real-time web and Dispersed Computing. Since connections are bi-directional streams and less chatty this makes the network less clogged and ensures low-latency for the livelihood of the connection. UDSP is far less chatty than HTTP and can be programmatically set to adjust its own reliability standards. This makes UDSP a highly useful protocol where high-throughput, low-latency and high reliability are required. Due to UDSP's programmatically dynamic nature, it's efficacious in situations of highly variable and or degraded network connectivity.

UDSP has optional puzzles included in the packets which allow providers and solvers to earn VIAT. Puzzles can vary and thus the puzzles are a Dynamic-Proof-of-Work. The puzzles may be encapsulated or point to data that is required for solving the puzzle. This functionality will be described in the next white paper for VIAT. The puzzles also function as congestion control and a way to limit the potential damages from DDOS attacks. Sentivate turns a typical DDOS attack into profit by the introduction of various puzzle types into packets. When a client solves the served puzzle the client and domain are credited by the network with Viat. If a server is under DDOS attack then the server can dynamically change the reward split up-to 100% for the domain. This ensures the attackers suffer more financial loss and have little to gain. Puzzles ensure that both parties have an incentive to act in good faith.

Products/Features

On top of the UDSP protocol, the universal web that Sentivate is developing will also include the following core features and products [\[ref\]](#):

Universal Identity System

There are two core components of the Identity System.

The first is the Identity Registrar which signs certificates & is the first layer of protection for the network.

- The Identity Registrar validates and keeps a record of active certificates on the network.

The other component is Identity Certificates which is like a passport and a form of identification on the Internet.

- Your Identity Certificate allows you to instantly signup, login, and or purchase an item. It also removes the need to create a username or password.
- Using key pairs instead of a traditional username and password relies on cryptography for enhanced privacy and security. Sentivate keypairs act as your identity for the internet.

Universal Domain System

There are three main components to the Universal Domain System which are:

1. Domain Registrar
2. Domain Information System
3. Domain Certificates

The Domain Registrar provides services to register & manage domains. The Domain Registrar also provides the Domain Information System with real-time domain information. Any changes to a domain such as ownership, routing, or cryptography will automatically notify the DIS. Another important feature of the Domain Registrar is signing domain certificates.

The Domain Information System hosts all domain certificates and serves them on request. Clients send requests to the DIS to retrieve a domains routing information and cryptographic details in order to establish a UDSP stream. The Domain Information System takes in a hostname and responds with the corresponding certificate.

Domain certificates provide hostname routing and cryptographic details. Clients use a D.C. to establish a UDSP stream with a destination domain.

Hybrid apps (hApp)

Hybrid Apps are self-constructing streamed single-page-applications. Applications are designed in a highly modular fashion. Application's assets are contained in their own file and are streamed to the client on an as needed basis. Only exactly when the client needs the resource is it fetched and delivered.

Sentivate's components allow for highly module asset streaming. For example, components can share the same CSS or HTML assets which ensures shared assets are only downloaded once and the duplicate code is never sent over the wire. Server loads and bandwidth is drastically decreased with this methodology as now the client is only pulling exactly what is needed.

Hybrid Apps can utilize an opt-in decentralized P2P CDN for assets in addition to other centralized CDN services. Making use of a Hybrid Content Delivery Network means that hybrid apps have high availability, scalability, and more bandwidth for real-time dynamic content.

All the benefits of centralized systems & decentralized networks provide hApps with the highest scalability potential. hApps are built using reactive, dynamic, and modular development methodologies. hApps are streamed and built over time much like a bridge building itself as you walk across. Only one initial page load takes place and thereafter pages are dynamically built as needed similar to Single-page-apps.

Adoption

The scope for adoption for the Sentivate project is huge, with an estimated 4.33 billion internet users across the globe. The proposed solution of a universal web would mean that current infrastructures are changed and new ones implemented so it is likely to be a long term adoption curve for the project.

Currently, there is no minimum working product so there is no current adoption amongst users for the proposed Sentivate product and protocol. The main-net is estimated to be launched in 2020/21.

However, we can gauge adoption sentiment for the project from the SNTVT token distribution and community engagement later in the review.

Competition

There is no direct competition within the cryptocurrency industry proposing to use the same protocol and features as Sentivate to resolve the same issues. As such this gives Sentivate a competitive advantage at this moment in time within this industry.

It must be noted that solutions to the internet infrastructure problems are likely in current discussion, implementation and development amongst governments and corporations. However, the global implementation of a project this scale will likely take a significant period of time.

COIN METRICS

There are 2 tokens available within the Sentivate ecosystem which are SNVT and VIAT.

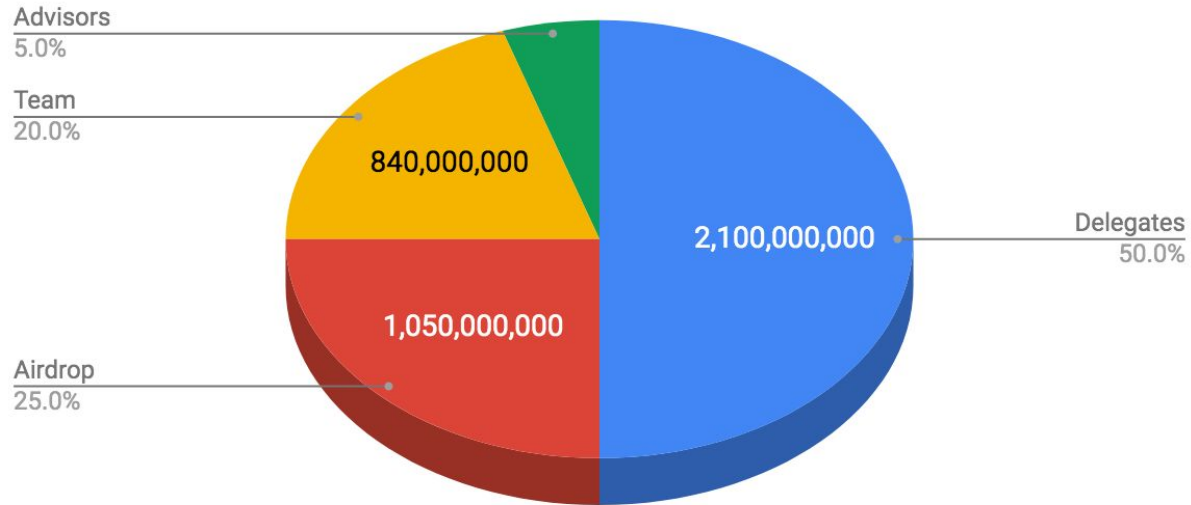
SNTVT

Token Info

| | |
|------------------|--|
| Symbol | SNTVT |
| Decimals | 18 |
| Contract Address | 0x7865af71cf0b288b4e7f654f4f7851eb46a2b7f8 |
| Block Explorer | Etherscan |
| Token Type | ERC-20 |
| Network | Ethereum |
| Max Token Supply | 4,200,000,000 SNTVT |
| Token Swap Info | 1000 SNTVT : 1 VIAT |

Token Distribution

Initial Token Distribution

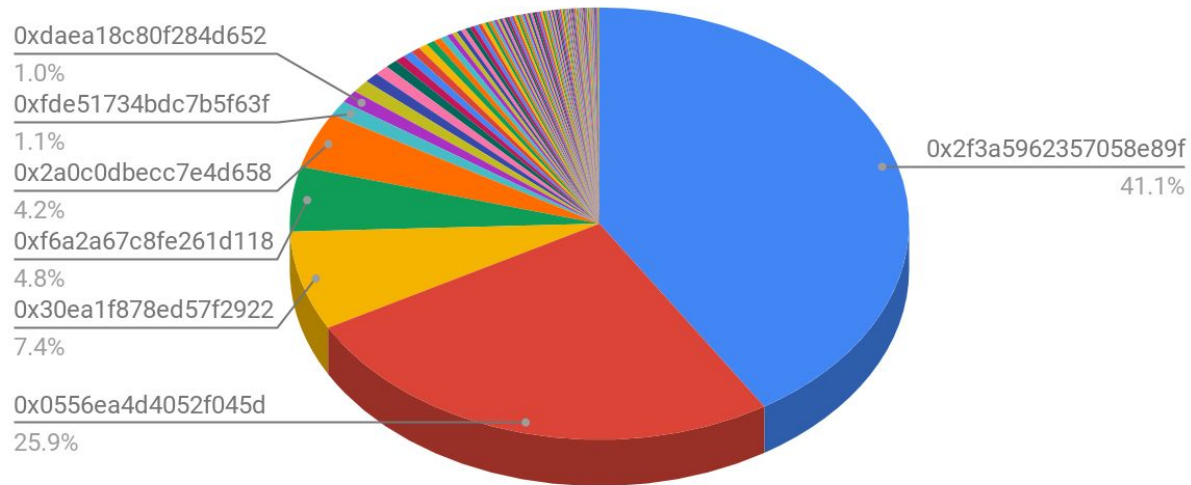


- There was a maximum of 4,200,000,000 SNTVT tokens created and these were distributed as above.

Circulating Supply

- The current circulating supply is shown below and indicates that the team are currently holding over 67% of the supply between the top 2 addresses.
 - The team wallet is held at **0x0556ea4d4052f045d90744fbfc181726d2fd2481** and locked until after the swap to VIAT tokens.
 - There are a total of 3783 SNTVT wallet holders indicating the interest in the project amongst investors in the crypto space.
-

SNTVT Distribution



SNTVT Utility

The team plan to swap the SNTVT token in the future to the VIAT token. Until then the SNTVT token currently has several utility functions:

- Those holding SNTVT will be able to gain early access to the network and tools.
 - Each SNTVT token is a vote that can be cast to push the project in a certain direction and vote on important issues, giving the project a governance model with its community.
-

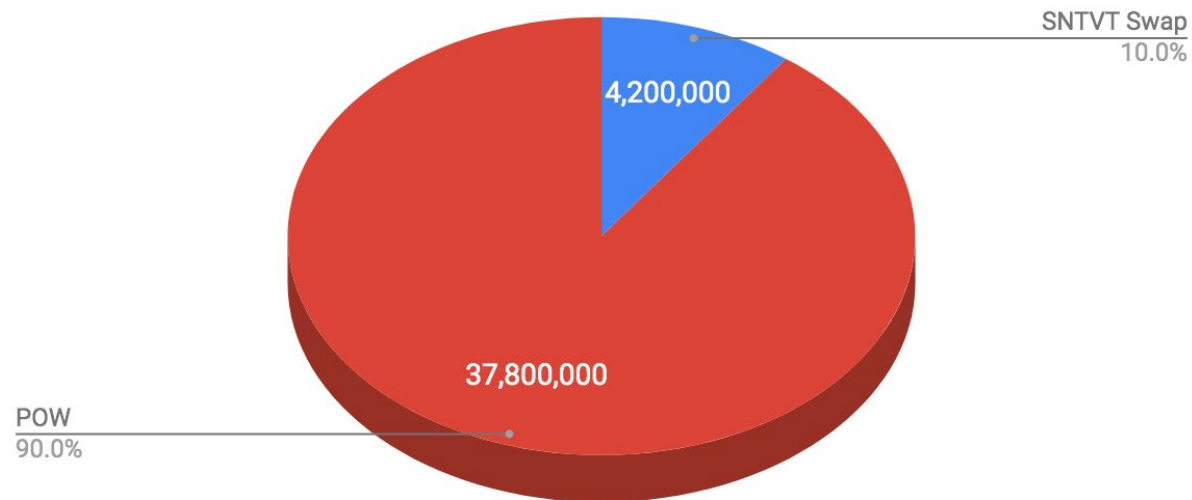
VIAT

Token Info

| | |
|------------------|---------------------|
| Symbol | VIAT |
| Block Explorer | N/A |
| Type | Hybrid POW |
| Max Token Supply | 42,000,000 VIAT |
| Token Swap Info | 1000 SNTVT : 1 VIAT |

Token Distribution

Initial VIAT Distribution



- The VIAT token will be swapped with the Sentivate token soon after the main-net is launched (estimated 2020/21), at a rate of 1000 SNTVT per 1 VIAT.
 - 4.2 million VIAT will be distributed via the swap and the remaining VIAT supply will be released via Proof of Work emissions.
-

VIAT Utility

- Viat will be the native cryptocurrency for the Sentivate network and utilizes a hybrid blockchain ([ref](#)).
- Viat's core systems are decentralized focused but enhanced by centralized components (the opposite of Sentivate's Web).
- Viat is designed to be fast, secure, and have some of the lowest transaction fees available.
- Viat's centralized portions can process instant transactions, provide wallet security, and alleviate network congestion when the decentralized network is under heavy load.
- However, these centralized features are opt-in only allowing users to forge their own path.

VIAT Mining

- Viat has a dynamic proof of work which can be mined in two ways.
- Direct mining is the main method, which will be explained in the Viat white paper, & the second method is through the use of packet puzzles in UDSP.
- Packet puzzles allow for passive mining of Viat while browsing the Universal Web. However, it's not enabled by default.
- The situations which arise that enable packet puzzles are: upon connection handshake, connection liveness check, DDoS protection, congestion control, and or the service chooses to enable it for their own reasons. It is up to the service to enable packet puzzles.
- This ensures that there is no need for constant mining in the background and gives real purpose to the mining process. Otherwise, it would be on all the time-sucking up resources & eating into battery life.

VIAT Interoperability

- Identity & Domain certificates also double as Viat wallet keys. This allows users to not only instantly sign into a service during a connection handshake, but also provide a way to purchase goods from services, tip sites, and or refund clients.
 - Viat is an integral part of the full functionality of the Universal Web without it only part of the picture is there.
-

TEAM

Company and Funding

The Sentivate project is part of a parent company Arity [\[ref\]](#) which was founded in 2014 and is registered in the United States. The Arity team consists of 6 team members, all of who are team members or advisors on the Sentivate project.

There was no public fundraising for the Sentivate project via a token sale. The funding for the project has been raised via private sales, however, there is no public information on any funds raised.

There is also no public information on the financials for the management/costs of the project however this is not uncommon for projects in this space.

The Sentivate token was distributed via a series of airdrops, with 25% of the SNTVT

Experience

As stated on the project website, there are currently 3 founding members of the project, 6 advisors and 9 core team members. The team has a wide range of roles including developers, business development officers, community leaders and admin staff [\[ref\]](#).

A look into the team's experience indicates that all of the co-founders have been part of the parent company Arity since 2014.

Matt is listed as having a bachelor's degree in Finance. Tom has no academic qualifications listed on his LinkedIn profile. During our interview with him, he was highly articulate and skilled with his level of technical knowledge about the product and market that Sentivate is targeting.

The remaining co-founder Lew, comes from a military background and is also the CEO of several other projects including a Cybersecurity firm.

The remaining team members, 7 out of 8 have their names and LinkedIn profile listed.

Advisors/Partnerships

There are 6 advisors listed on the project, which include 2 founders of the Arity project, Jamie Linkowski and Robert Brunelli.

Development

Looking at the roadmap for the project gives us an insight into the development taking place and milestones achieved. The roadmap listed on the project website is clear, concise. A positive is that the roadmap is updated every 3 months and lists the objectives for the 3 months ahead [\[ref\]](#).

According to the listed roadmap all listed milestones were achieved to date. The upcoming milestones listed for June and July are:

- Universal Domain System
- Universal Identity System
- Web Browser

The milestones listed above are key elements of the Sentivate project. The team are working hard to ensure that they are on target to be delivered, with a demo of the web browser available [here](#)

Project Growth

The growth of the project is key to the success of the project and aside from development on the project, the team are actively marketing and promoting Sentivate as they come closer to the launch of their core products listed above.

It is anticipated that the upcoming developments and achieved milestones, will lead to a new stage in the growth of the project. It is also noted as a positive that the VIAT token will be a hybrid Proof of Work token, opening new avenues of growth amongst the mining community.

The Sentivate core team has grown from a core of the 6 Arity team who started the Sentivate project, to a team consisting of 18 staff.

CODE REVIEW

For the purposes of this review, the Sentivate team requested an audit on the smart contract for the Sentivate Token (SNTVT). The results are provided in our full report [here](#).

In this report, we have concluded about the security of Sentivate Smart Contract [\[ref\]](#). The smart contract has been analysed under different facets.

The audit found that the Sentivate smart contract adapts a very good coding practice and has a clean, documented code.

The Smart Contract logic was checked and compared with the one described in the whitepaper and no discrepancies were found.

COMMUNITY

Users

The Sentivate project has numerous channels of communication which are:

- Telegram 17,268 members
- Discord 1839 members
- Twitter 9569 followers
- Medium 66 followers
- Youtube 159 subscribers
- Reddit 807 members
- Facebook 1411 members

Community Engagement

The majority of the Sentivate community involvement and engagement takes place on Telegram, Discord which is healthy as it allows for 2-way conversations between the team and community.

Both platforms have daily activity in the chat and admin/mods are engaged with any questions from the community replying in a timely manner, often replying immediately.

Analysis of the Twitter channel shows a rating of 34.8 engagement per tweet according to Rivallq rating. This is 4.5 times higher than the average engagement rate across all industries [[ref](#)].

Governance

The Sentivate team are keen to involve their community and as mentioned earlier, each SNTVT token is a vote that can be cast to push the project in a certain direction and vote on important issues. By issuing the token as airdrop, its seen as a positive that all token holders will have a vote.

PRICE ANALYSIS

Chart

For analysis purposes, we used both ETH and USD charts for analysis.

SNTVT/ETH



- ATH in ETH is 0.00002694 Ethoshi
- ATL in ETH is 0.000000460 Ethoshi
- Highest ETH trading volume day is 6th July 2019

SNTVT/USD



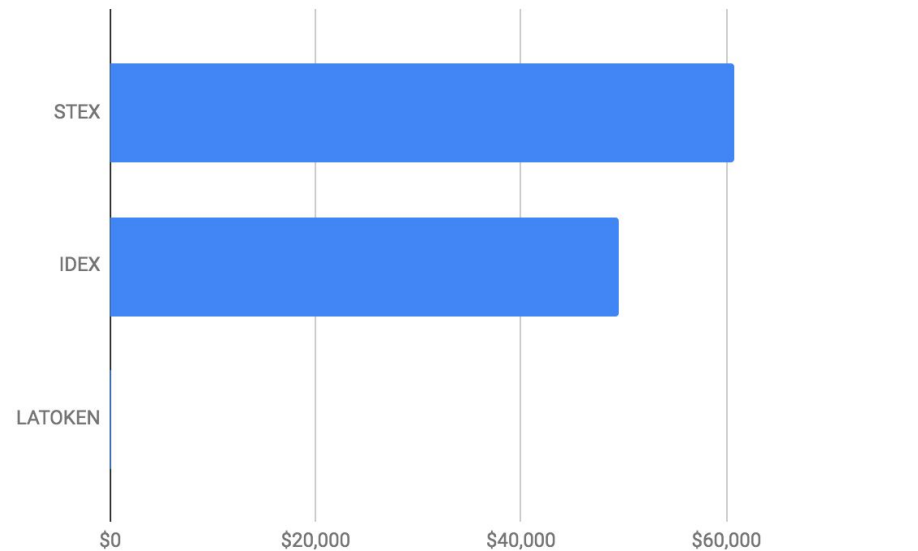
- ATH in USD is 0.00374c
- ATL in USD is 0.000056c
- Highest USD trading volume day is 6th July 2019

Exchange Listings

Sentivate is currently listed at the following exchanges:

- LAToken
 - STEX Exchange
 - IDEX
-
- LA Token offers BTC, ETH and USDT pairs.
 - currently only available for trading as an ETH pair on IDEX and STEX.

24 Hour Trade Volume 110,317



Liquidity

As shown above with the trading activity, the majority of the liquidity is available on IDEX and STEX exchange.

A quick analysis of the Etherscan block explorer shows the activity of the IDEX exchange addresses, indicating that 155,997,442 SNTVT or 3.7% of the supply are held at IDEX.

SUMMARY OF SNTVT REVIEW

Following our in-depth review, the Sentivate project receives a B- Rating.

Conclusion

- Sentivate is one of several projects that are aiming to address the outdated technology being utilised for the internet and world wide web. The use case for the project is a valid one, addressing the current issues faced and the anticipated demands.
 - There is significant real world demand for solutions and first movers within this field have massive potential. The technology proposed by Sentivate is outlined in their [Whitepaper](#).
 - In total the Sentivate team consists of a total of 20+ members currently. The team has a wide range of roles including developers, business development officers, community leaders and admin staff [\[ref\]](#). Overall this is a well structured team split into smaller teams with a clear focus on development, marketing, and business development, The team have a strong grasp of their product however will likely need to grow the team in several areas as the project develops.
 - The token linked to the project, SNTVT, was initially airdropped to the public, however these are due to be swapped with a new token, VIAT following the release of the main net. The swap itself will reduce the max supply by a factor of 1000, which will inevitably have an impact on the token price but not necessarily the market cap.
 - The marketing and promotion for the Sentivate project is impressive, which is also reflected in their community development, engagement and support.
 - In conclusion, the project has ambitious aims, with the adoption curve for Sentivate likely to be a long term one. The launch of the Alpha Network demo is indicative of the development taking place on the project.
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STRENGTHS

- Real world use case with global market for adoption
 - Roadmap is concise and plans for 3 months at a time, updated regularly and milestones are being achieved
 - MVP due for launch in the next few weeks
 - Registered company, Arity LLC, incorporated several years prior the launch of Sentivate
 - Sentivate is one of several projects managed by Arity LLC
 - Arity team members are also core team members at Sentivate and publicly linked
 - Team are very knowledgeable around their tech and product
 - Development is active, with the demo browser v2 released recently.
 - The team are proficient in their communication around the project with regular project updates and announcements on their social media
 - Press releases coinciding with development milestones
 - Large number of followers on social channels
 - Governance model allowing token holders to vote
 - Multi lingual website, whitepaper and Discord channels.
 - RivalIQ analysis shows SNTVT Twitter engagement rate is 4.5 times higher than the industry benchmark
 - The team requested a code review of the SNTVT ERC-20 contract by Proof of Review
 - Contract was assessed as having no immediate security issues and the full report is available [here](#)
 - Codebase for the VIAT token is unique
 - SNTVT is currently listed on several exchanges
 - Liquidity is distributed between exchanges and listing pairs
 - There are several trading pairs for the coin including ETH and USDT
 - Data points are available on major listing and charting sites
 - Price has moved through one full cycle for analysis
 - Price retraced back to a previous accumulation zone
 - SNTVT was airdropped to the public, meaning there was little to no entry barrier
 - 75% of the SNTVT tokens will be distributed amongst the public
 - Legal advisor on the team with over 20 years experience and no current risk of an exchange delisting based on business model
 - Several independent reviews of the Sentivate project along with constant press releases around updates
 - SNTVT team do not mention price updates or speculation, instead concentrating on development and growth
-

WEAKNESSES

- Huge undertaking to replace global internet infrastructure and large tech companies are also addressing this issue
- Working product currently in demo/beta testing
- Team is a small one with varied skills and experience
- They will likely need to expand in several areas if the project is to grow
- The project would benefit from developing more partnerships, more likely to be achieved once they develop their user base/product
- Much higher number of followers on Telegram than Discord
- Not clear if governance model will apply to VIAT token once the token swap with SNTVT occurs.
- No public domain information relating to the Sentivate website Whois check
- We recommend that projects also conduct 2 independent audits from separate providers.
- Trading volume potentially limited by current exchanges SNTVT is traded on
- No clear guide for project valuation
- SNTVT is due undergo a token swap to VIAT once the main net launches
- No clear info on VIAT, whitepaper is due later in 2019
- POW daily emissions could have an affect on price compared to current fixed supply

OPPORTUNITIES

- Potential to be acquired by a large tech corporation
 - Potential to have protocol adopted on a global scale
 - There is opportunity for growth within the team for new team members, advisors and partnerships
 - Grow community prior to mainnet launch
 - Develop relationships with other projects as a result of community awareness and networking
 - Potential to be listed at Github Ranking sites such as [CoinCodeCap](#) or [CryptoMiso](#) to provide detailed information around Github activity
 - Potential fiat paring could open new opportunities for investors
 - Room for market price discovery based on no initial sale price or POW mining price for SNTVT
 - Max supply will be reduced when token swapped at a rate of 1000:1
 - 90% of the new VIAT token supply will be via POW emissions, meaning adoption opens up amongst miners
-

MATRIX SCORE 64/100

| | | | | | |
|----------------|----------------------|----------------------|-------------------|-------------------|---------------------|
| ABOUT | USE CASE ✓✓✓ | COMPETITION ✓✓ | ADOPTION ✓✓ | FEATURES ✓✓ | ROADMAP ✓✓✓ |
| TEAM | PUBLIC ✓✓✓ | EXPERIENCE ✓✓✓ | DEVELOPMENT ✓✓ | PARTNERSHIPS ✓ | FINANCES ✓ |
| COMMUNITY | COMMUNICATION ✓✓✓ | FOLLOWERS ✓✓✓ | GOVERNANCE ✓✓✓ | ENGAGEMENT ✓✓✓ | WEBSITE ✓✓ |
| CODE | EXTERNAL AUDIT | CODEBASE ✓✓✓ | ACTIVITY ✓✓ | RANKING SITE | POR AUDIT ✓✓ |
| PRICE ANALYSIS | EXCHANGES ✓ | LIQUIDITY ✓✓ | PAIRINGS ✓✓ | DATA ✓✓ | T.A ✓✓ |
| COIN METRICS | DISTRIBUTION ✓✓ | BLOCK EXPLORER ✓✓ | EMISSIONS ✓✓ | UTILITY ✓✓ | EASE OF ENTRY ✓✓ |
| MISCELLANEOUS | LEGAL ✓ | HYPE ✓ | WALLET | | |

DISCLAIMER

- This is a sponsored voted review paid for by the Sentivate team.
- This review is intended for educational purposes only and should not be considered as financial advice.
- Before investing in any project we recommend you do your own research and consult a registered financial advisor.
- All information listed is accurate at the time of publishing on 15th August 2019.

METHODOLOGY

- We use a combined rating score out of 100, covering all the listed metrics for project reviews.
- Each metric is rated out of 3 which includes a potential bonus point in every metric.
- We also reserve the right to award a bonus point for any outstanding achievement for a project.

| | | | |
|-------------------|-----------------|-----------------|-----------------|
| 90-100 A++ Rating | 75-79 A- Rating | 60-64 B- Rating | 45-49 C- Rating |
| 85-89 A+ Rating | 70-74 B+ Rating | 55-59 C+ Rating | 40-44 D Rating |
| 80-84 A Rating | 65-69 B Rating | 50-54 C Rating | 30-39 E Rating |

PROJECT INFO AND SOCIALS

| | |
|--------------------|---|
| Symbol | SNTVT |
| Price | 0.00134c USD |
| Market Cap | \$3,041,906 USD |
| Total Max Supply | 4,200,000,000 SNTVT |
| Circulating Supply | 2,182,270,515 SNTVT |
| Website | https://sentivate.com/ |
| Github | https://github.com/sentivate/SentivateAlphaNetwork |
| Twitter | https://twitter.com/sentivate |
| Telegram | https://t.me/sentivate |
| Medium | https://medium.com/@sntvt |
