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Something from nothing

Alkimi Exchange

The New Digital Ecosystem for Users, Advertisers and Publishers

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Alkimi Exchange

Abstract

The Alkimi Exchange is a decentralized advertising exchange built on the Constellation Network's Hypergraph. Using the OpenRTB standards for programmatic advertising, Alkimi Exchange will host a media exchange auction in real-time on the Hypergraph by developing a hosted state channel, AlEx.

AlEx is the state channel facilitating a programmatic exchange that will provide cost savings and fraud prevention for all stakeholders in the advertising industry: users exposed to digital advertising, publishers that host advertising, and advertisers that buy digital media.

Constellation's HGTP ecosystem and the $DAG token economics have been inspired by and designed according to the principles of a new economic model, Generative Economics. The term coined by Marjorie Kelly and defined as:

"A living economy that is designed to generate the conditions for life to thrive, an economy with a built-in tendency to be socially fair and ecologically sustainable."

The Hypergraph is a feeless decentralized network that leverages the principles of Generative Economics (i.e. sum is greater than the parts). This enables the economic opportunity to port a centralized advertising exchange onto a decentralized network to increase the auditability and immutability of digital advertising serving. Furthermore, the Hypergraph is technically scalable in that it leverages a decentralized graph base database (directed acyclic graph) and topological ordering needed for data processing and media serving. Constellation's consensus mechanism runs two consensus mechanisms in parallel to ensure speed and security.

The Alkimi Exchange is being developed to build on the Hypergraph, using their scalable protocol, called the HyperGraph Transfer Protocol (HGTP). HGTP allows developers to define their data types while utilizing Constellation's concurrent consensus mechanism to validate the data type and schema. Their approach enables speed and security for complex data processing.

For Alkimi Exchange, the Hypergraph is the only decentralized network that can support the speed, security and immutability needed for the online serving and transferability of media between network participants.

The following paper outlines a new digital advertising exchange that prevents fraud, increases transparency and rewards all stakeholders that participate in digital advertising.

Alkimi Exchange is the first digital advertising where an immutable record of all media serving and engagements will be recorded on a blockchain and usher in accountability for the new digital advertising paradigm.

Opportunity

The Internet's first advert was served in 1994; it's now a multi–billion dollar industry. In 2020, online advertising surpassed $340bn and accounted for over 50% of all media spend globally.[1]

The exponential growth of digital advertising was fueled by rapid innovation. As a result, the industry has become highly fragmented and dominated by Facebook and Google, whose 'walled gardens' have claimed a 53.3% share of all digital advertising spend (worth around $181.5bn).[2]

At its core, programmatic advertising is an automated way to buy or sell online media using a combination of technologies. In this sense, it shares similarities with traditional centralized financial and derivative exchanges.

Buyers and sellers transact online media programmatically in 1/1000th of a second via preset strategies.[3] Data is relayed between a webpage to multiple centralized servers to deliver an advert concurrently with content on page load.

[1]Moffett Nathanson Advertising Spend Model Mar 2021
https://www.s4capital.com/data/production/2021-03/S4%202020%20Preliminary%20Results%20Final.pdf?wVr_fScHBNooorX8VUB
N.fXkAR4H_U61s

[2] eMarketer, October 2020.
Includes advertising that appears on desktop and laptop computers and mobile phones, tablets, and other internet-connected devices, and includes all the various formats of advertising on those platforms; net ad revenues after companies pay traffic acquisition costs (TAC) to partner sites.
[3] https://epom.com/blog/programmatic/the-anatomy-of-programmatic

In 2017, Marc Pritchard – Chief Brand Officer for Procter and Gamble, referred to "a media supply chain that is murky at best and fraudulent at worst."
His words have been echoed, not just by other marketing leaders, but by regulatory bodies who have questioned Google and Facebook's walled gardens and their effect in creating a duopoly in the market.

In 2019, decentralized finance (DeFi) emerged as an evolution to walled garden centralized crypto exchanges. DeFi solutions primarily focus on the Ethereum network, where liquidity pools enable trading activity within the Ethereum ecosystem. While these solutions have created exponential adoption and further utility of cryptocurrencies, transaction fees for traders continue to plague the industry, slowing down mainstream adoption.

Constellation Network's Hypergraph presents a more viable, alternative protocol to Ethereum because of its feeless transaction economy. Industries relying on high volume, instant transactions can't leverage the Ethereum Network because of the cost disadvantage it creates due to 'gas fees'. For established and traditional industries, like digital advertising, Ethereum is an unviable network to host such a solution.

Similarly to DeFi, the digital advertising ecosystem stands to gain significant operational and financial performance for all involved parties by adopting liquidity pools, decentralized node operation and edge computing.

A decentralized ad exchange would gain an immediate competitive advantage against centralized ad exchanges – the top six generate c.$5bn of revenue per annum.

We forecast that the serviceable obtainable market for a decentralized ad exchange is $50m per annum (1% revenue share of the top 6 ad exchanges), growing rapidly to $150m per annum (serviceable addressable market). The total addressable market for the first decentralized ad exchange would be $1.58bn per annum.

Problem and Solution

The shift to online advertising has created improved efficiency, through the real-time exchange and bidding of user data, with quantifiable return on investment. Several inefficiencies persist with the industry due to the reliance on centralized exchanges.

Google and Facebook are some of the largest consumers, creators, and sellers of data. Their advanced machine learning around their users' data has solidified their market share. Independent technology companies have successfully offered alternative solutions to help publishers generate revenue. However, they've exasperated the issue by creating an "ad tech tax". For every $5 spent by an advertiser in 2020, a publisher received $2.55, and approximately one-third of supply chain costs were 'completely untraceable'.[4]

In April 2021, an Antitrust case filed against Alphabet accused Google of running a secret project in collaboration with Facebook - "designed to give their clients a competitive advantage over others by revealing exchange data not accessible by all."[5]

Facebook and Google's dominance, coupled with numerous independent technologies, has created a value leak that has broken the intended value exchange of the Internet.

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[4]ISBA Programmatic Supply Chain Transparency Study, May 2020
https://www.isba.org.uk/system/files/media/documents/2020-12/executive-summary-programmatic-supply-chain-transparency-study.pdf

[5] https://www.wsj.com/articles/states-sue-google-over-digital-ad-practices-11608146817?mod=article_inline

Figure 1 - Intended and Actual Value Exchanges of the Internet
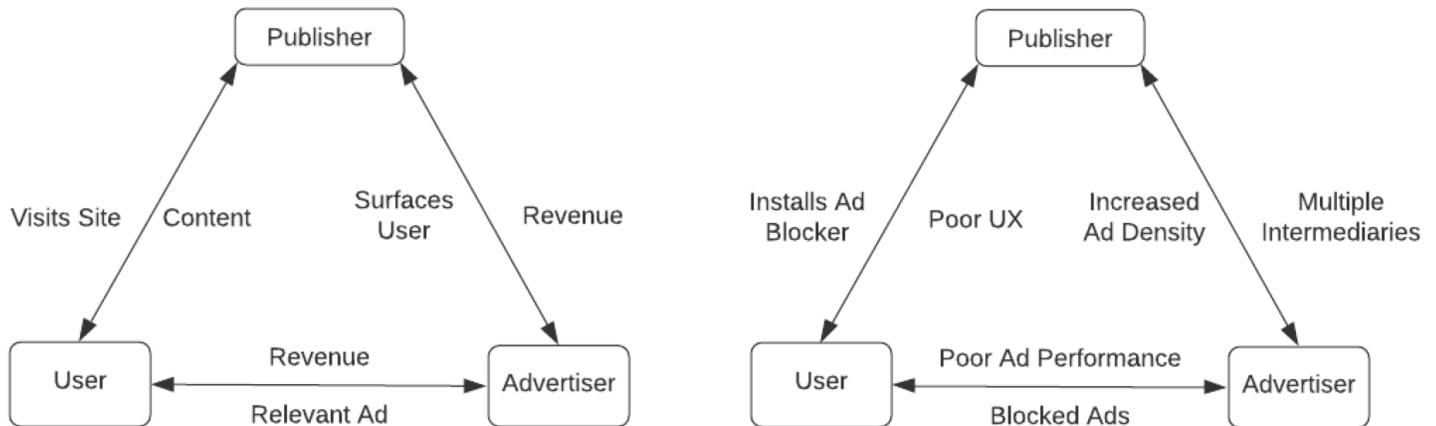
To remedy the declining ad revenues, Publishers increased ad density on any given page and implemented additional monetization partners.

Websites have become harder for users to navigate as page load times have increased exponentially. Third-party Javascripts carry out a very narrow set of functionality on-page, HTML markups, social widgets, advertising delivery and tracking. 57% of script execution time is from third-party scripts, and the top 100 domains already account for 48% of all third party requests. If the top 100 URLs reduce third party scripts, the entire Internet will see a 2-3% performance increase.[6]

Users have responded to the diminished experience online by installing ad blockers. In 2021, 36% of respondents in the UK reported using an adblocker.[7]

Alkimi Exchange will solve the following issues facing the digital advertising market:

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[6] The Web Almanac, 2019 https://almanac.httparchive.org/en/2019/performance
[7] Statista Research Department, 29 Jan 2021

Fraudulent Ad Serving

Ad fraud was estimated to have cost $66bn (20% global digital ad spend) in 2020.[8] Detection of fraud has to happen based on historical data, rather than in real-time, in the same way, advertising is sold. This leaves both buyers and sellers vulnerable to fraudulent transactions.

Solution

Using Constellation's state channel framework, we can define various data types to identify and restrict fraudulent actors from entering the exchange or easily find and exclude bad actors. Alkimi Exchange will utilize current industry-wide standards and novel use of the Constellation Network - Proof of Reputable Observation (PRO) consensus mechanism to build up a real-time view of every market participant. This gives Alkimi Exchange's customers a real-time fraud prevention tool.

Transaction Fees

In the United Kingdom, 49% of revenue from programmatic transactions goes on ad-tech fees, resulting in ineffective campaigns and publishers seeing declining revenues.[9]

Solution

Leveraging Constellation's feeless network, the Hypergraph, we can offer cost-effectiveness with fees significantly cheaper than incumbent technology. Alkimi Exchange customers will benefit from reduced transaction fees, enabling them to become more profitable.

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[8]Ad Age & Spider Labs, *Combating ad fraud in the age of COVID-19* https://s3-prod.adage.com/whitepapers/combattingAdFraud.html?utm_source=AAsocial&utm_medium=social&utm_campaign=SpiderLabs_WP https://www.thedrum.com/news/2020/11/05/fake-ad-traffic-dips-90-channels-signed-up-anti-fraud-project-says-tag
[9] ISBA Programmatic Supply Chain Transparency Study, May 2020

Auditability

Many existing exchanges refuse to offer log-level data to clients, citing the cost implications of surfacing the data. There have been multiple instances of exchanges front-running their clients (For example, Index Exchange Bid Shading, 2018 and Google's Project Bernanke, 2021).[10] [11]

Solution

By leveraging Constellation's Hypergraph, and concurrent consensus mechanisms, advertisers can be assured their advert was seen on the intended publisher page via immutable and verifiable data; conversely, publishers can be guaranteed their impressions (traffic) is being monetized at the price paid by the advertiser.

By making all data available allows advertisers to inform trading strategies in real-time.

Due to the transactions taking place in Constellation's immutable, decentralized and trustless environment, stakeholders can query log-level data in real-time means Alkimi Exchange customers will have complete transparency on the path of their digital advertisements.

Instant Reconciliation

Tracking and recording of ad calls don't always make it back to the intended endpoint before the ad is rendered. In response, the industry allows 10% loss tolerance for all deals.[12]

Solution

The Hypergraph will be fast enough to transact and serve media (advertising impression) within 1000 m/s - the finality window set by publishers. By which, all bid responses from buyers must be submitted to the auction.

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[10] https://www.adexchanger.com/platforms/index-exchange-called-out-for-tweaking-its-auction/
[11] https://www.wsj.com/articles/googles-secret-project-bernanke-revealed-in-texas-antitrust-case-11618097760
[12] Source: IAB Standard Terms and Conditions 3.0, Clause XIII
https://www.iab.com/guidelines/standard-terms-conditions-internet-advertising-media-buys-one-year-less/

Transactional Capacity

Programmatic ad exchanges have no way to scale quickly during peak internet browsing times: queries per second (QPS) are limited due to the cost implication of high volumes of QPS.

Solution

The Hypergraph allows Alkimi Exchange to use network resources whenever they are needed through an incentivization mechanism and the use of $DAG. This gives us the ability to allocate network resources as the programmatic transactions increase on the network allowing us an effective way to scale quickly.

The innovation of the Alkimi Exchange technology will deliver a programmatic advertising exchange with the speed, security, and auditability of buying and selling ads on a distributed network, powered by rewards, to transform the industry.

Value Proposition

Alkimi Exchange will reestablish the intended value exchange on the Internet between Publisher, Advertisers and Users by supporting the real-time buying and selling of digital advertising via a novel decentralized application, an L_o application, on Constellation's Hypergraph.

Due to the highly liquid marketplace with low cost and high scalability, we will support a dynamic business model. Our ability, via the HGTP, to bind data and value will allow publishers to reward users for viewing ads. Though this will be part of the future roadmap, we have considered and ensured the Alkimi Exchange serves users best interests.

Advertisers - Nike, P&G, Unilever et al.

- Transparent and Authenticated Supply Chain
- Enhanced Trading Strategies
- Instant Reconciliation of Advertising Spend
- Reduced Transaction Fees
- Increased Ad Performance

Publishers - CNN, NY Times, Time Magazine et al.

- Increased Revenue and Profitability
- Auditability of Buyers in Supply Chain
- Visibility of all Data in Supply Chain
- Enhanced Trading Strategies
- Increased Ad Performance

Users - Internet Users

- Faster Loading Web Pages
- Decreased Ad Density
- Derisked Internet Browsing
- Rewards for Internet Browsing

AlEx - MVP

AlEx is the State Channel facilitating real-time bidding on digital ad placements.

The Alkimi Exchange Protocol features:

- Low fees for the buying and selling of digital ads
  - 1.5% buyer fees
  - 1.5% seller fees

- Interoperability between existing, established incumbent technology and standards
- Transparency of the supply path through an immutable record of all data on the Alkimi Exchange
- Operator Rewards
- Instant reconciliation of advertisers' spend and publishers' revenue for supply path audits
- Privacy law (GDPR and CCPA) compliance and
- Maintaining an immutable, distributed and queryable record of all exchange transactions.
- Advanced Market-Making Algorithms to effectively utilize the now accessible data sets to create strategies that support marketers KPIs (Brand Awareness, Brand Recall, Purchase Intent, Conversion)
- Community ownership and governance of the network
- Operator Rewards for liquidity staking

Operations

Centralized Ad Exchanges use widely adopted industry standard Service Level Agreements (SLA's), such as Open RTB 2.5, GDPR, CCPA, and IAB Gold Standard. These are established and governed standards around required business practices and data collecting and utilization to deliver digital advertising.

These global industry standards are data schemas that can be defined in the L_o application and state channel. Smart contracts cannot support the validation of complex data types like these standards, and thus, L_o state channels will be the decentralized standard to validate advertising transaction data.

By leveraging the L_o state channel and Hypergraph Network, we can create a fully scalable decentralized ad exchange that adheres to industry standards, government regulation and SLA's. This will eliminate the need for advertisers to deploy third-party tools to ensure that media delivery corresponds to the campaign objectives and regulations. By using the Hypergraph, we will create an immutable audit trail of all media serving transactions.

Figure 2 - AIEx MVP
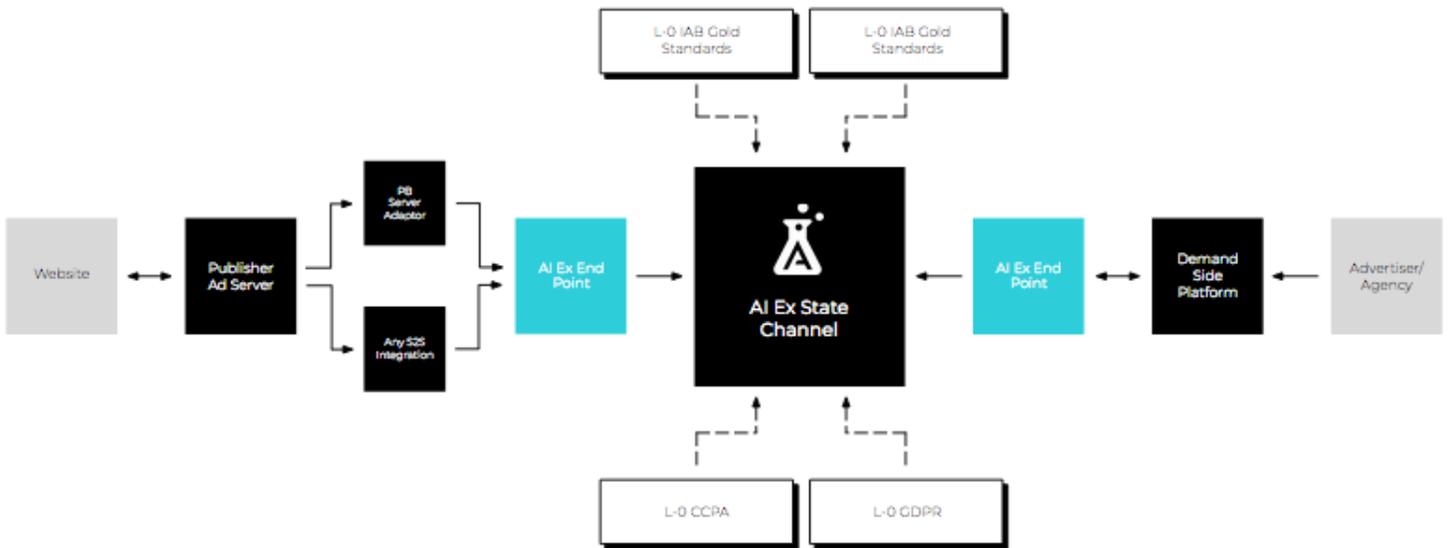
The Alkimi Exchange will roll out in a phased approach, as follows:

Phase	Date	Objectives
Phase 1	Q3 2021	ERC-20 token minted Build end points built to ensure interoperability of AlEx with the existing technical infrastructure
	Q4 2021	Migration to L_0 token Launch of AlEx Test Net Implementation of AlEx Data Schemas Open RTB 2.5, GDPR, CCPA compliance
Phase 2	Q1 - Q2 2022	Official AlEx launch VAST compatibility TAG Accreditation
Phase 3	Q3 2022 -	MRC Accreditation IAB Gold Standard Accreditation

In preparation for the launch of the AlEx state channel, we will create the requisite endpoints to allow interoperability of AlEx endpoints with the existing technical infrastructure:

Supply Side AlEx End Points

- Prebid
- Prebid Server
- Index Exchange

Build Demand Side AlEx End Points

- Double Click Bid Manager
- ONE by AOL
- MediaMath
- Simple.fi
- The Trade Desk

- Beeswax
- Basis DSP
- DataXu
- Stack Adapt
- Scale-Out Ad Platform

In Q4 2021, we will migrate to the L_0 token and launch the AlEx testnet. AlEx is designed to incorporate the following industry standards:

- Open RTB 2.5 Datasets
- Impression Object Bid Requests
- GDPR Compliance
- CCPA Compliance

Tokenomics

Utilizing the Alkimi Exchange will provide significant savings for all parties alongside a more equitable distribution of advertising spend. In addition, advertisers can expect to save significantly on total spend whilst achieving better outcomes. Content providers can expect to increase revenue by up to 63%. This is an attractive proposition that is likely to provide significant demand for the Alkimi Exchange and the $ADS token.

Phase 1

ERC20 $ADS tokenomics

Initial offering

The $ADS ERC20 token will be launched in Q3 2021. The primary function in this phase will be to test market demand, basic staking functions and build the user and client base of the Alkimi Exchange. We will also engage in community development,

marketing and other business operations. The launch of the L_0 token will take place alongside the deployment of fully operational advanced functionality L_0 state channels.

Distribution

The core tenets of Alkimi exchange are fair and equitable distribution of revenue to all parties. We have reflected this in an equitable token distribution model where platform tokens and public sale tokens account for at least half of the tokens in circulation.

In total, 100,000,000 $ADS tokens will be minted. The initial price will be between $0.06 - $0.10.

	Allocation	Tokens
Private/ Public Sale	20%	20,000,000
Team	10%	10,000,000
Advisors	10%	10,000,000
Marketing	15%	15,000,000
Staking Rewards	5%	5,000,000
Development Bounty	5%	5,000,000
Reserve	5%	5,000,000
Exchange Liquidity	3%	3,000,000
Platform Tokens	27%	27,000,000
TOTAL	**100%**	**100,000,000**

Private and Public Sale

Private sale will be 13% of the tokens divided into 3 rounds at $0.06-$0.08 = $920,000
Public sale will be 7% of the tokens at $0.10 = $700,000
Total raise $1,620,000.

The initial valuation of the total supply is $9,650,000.

All private sale tokens are vested for a minimum period to the following schedule:

Private Sale 1 will be 50% unlocked at launch and the remaining 50% after six months.

Private sale 2 will have 50% at launch and the remaining 50% after 3 months.

Public sale information will be available through our social channels at least 7 days before the event.

All tokens are eligible for staking during that period. Staking details will be provided closer to launch date.

Platform Tokens

27% of the tokens will be used to provide incentives for participation and rewards to all the platform users. Platform tokens will be distributed for publisher onboarding and incentives for trading to the most significant exchange users. We will aim to make the platform as attractive as possible for users to gain discounts for paying fees with $ADS tokens.

Phase 2

L_0 $ADS tokens launch

From Q1 2022, ERC20 tokens will be swappable for L_0 tokens.
The L_0 token will be the underlying utility asset of the Alkimi Exchange. Details of the swap event will be provided on our social channels close to the launch of the L_0 $ADS token.

L_0 $ADS tokenomic overview

Holding the L_0 $ADS token will facilitate:

Commercial Entities

1. Access to the Alkimi Exchange to buy and sell digital advertising
2. The bandwidth required for their throughput
3. Reduced fees when buying and selling digital advertising
4. Access to premium services

Other Network Participants

5. Staking to the liquidity pool to facilitate data bandwidth requirements
6. Leasing tokens to commercial entities not wishing to hold crypto assets

Following a successful launch in Q1 2022 and widespread use incentivizing early adopters, the cost of access to the Alkimi Exchange will switch to a USD peg in Q1 2023.

Given that the cost of access (A) to AlEx is

$A = C \times P$

Where C is a constant from 200k to 2.5m depending on the tier

P is the price of the $ADS token

The average value of A will be calculated in the six months preceding the end of Q1 2023.

At this point, the requirement for $ADS tokens will be pegged to USD.

This will allow continued appreciation of the $ADS token and rewards incentives for early adopters whilst bringing down any barriers for widespread adoption within the industry.

L_0 $ADS Tokenomics in Detail

Commercial Entities

Users of AlEx will require the $ADS token for both access to the Alkimi exchange (1) and to facilitate their throughput/bandwidth (2). Bandwidth requirements will be proportional to their network usage.

1. Access to AlEx.

Entities wishing to transact on the Alkimi Exchange will be required to hold or lease the $ADS token. Nominal holdings and holdings required for additional cost savings are represented in the table below.

	$ADS	Nominal Holdings
Tier 1	200,000	Access to AlEx
Tier 2	500,0000	Additional 5% fee savings
Tier 3	1,000,000	Additional 10% fee savings
Tier 4	2,500,000	Additional 15% fee savings and premium services

2. The Bandwidth Pool

To facilitate the bandwidth of the network, this large liquidity pool will require sufficient $ADS tokens.

Users will stake their tokens to (or lease their tokens from) this pool.
To facilitate throughput, users will be required to hold enough $ADS tokens to enable their required throughput. As such, users who require higher bandwidth will need to stake or lease more $ADS tokens.

In the onboarding phase, 25% of the $ADS tokens set aside for the platform will be allocated temporarily to help facilitate the easy (and low cost) onboarding of new

users. These can be adjusted to provide the requisite bandwidth required to operate efficiently on the Alkimi Exchange.

Once onboarded and required throughput has been established, users will be required to either purchase or lease the newly determined quantity of $ADS tokens.

Users wishing to access the AlEx but not wishing to purchase $ADS tokens will be able to lease the token from a separate $ADS token pool. These same users will also lease the tokens required for throughput from the bandwidth liquidity pool.

Given that owning the $ADS token will allow the dual benefit of gaining both throughput and a percentage of the pool staking rewards, all participants will be financially incentivized to adopt the $ADS token.

3. Fees

The publisher will pay a licence fee, equivalent to 1.5% of the revenue they earn through the exchange.
These fees will one reduced as per the table below.

	$ADS	Nominal Holdings
Tier 1	200,000	Access to AlEx
Tier 2	500,000	Additional 5% fee savings
Tier 3	1,000,000	Additional 10% fee savings
Tier 4	2,500,000	Additional 15% fee savings and premium services

4. Premium Services

We will also allow the largest holders of $ADS tokens to access new features exclusively for a fixed time. We may add other incentives for the highest $ADS token holder, at a later stage based on the real-world application of the ecosystem.

–are likely to include the following

Network participants:

Access leasing

Users not wishing to purchase and hold the $ADS token but requiring them to access the AlEx may lease them from an additional (access) pool leased from holders.

5. The Access Pool

Tokens leased from this pool will remain in the pool but will activate the users' wallet address. Monthly fiat payments will be set at 50% APR. The monthly payments will be fixed for each 12 months at 50% of the USD equivalent value of $ADS tokens required at the time the lease begins:

	Pool Size Cap	**APR**
AlEx access pool	10,000,000	Variable depending on the percentage of pool usage unto max 50%

Eg Nominal access at time lease starts for 200,000 $ADS tokens at $0.20 = $40,000. Therefore, lease payments would be 50% of this – $20k annually – divided by 12 monthly payments of $1667. These would be converted to $ADS and paid into the pool.

6. The Bandwidth Pool

This uncapped liquidity pool will require sufficient $ADS tokens and nodes to facilitate the bandwidth of the network.
All users and network participants will operate nodes or stake their tokens to (or lease their tokens from) this pool.
Node operators and token stakers will initially receive 25% APR. The funds required to maintain this APR will come from:

a. A proportion of the fees earned by AlEx from transaction fees paid by buyers and sellers of digital advertising.
b. The payments from users leasing their tokens from the pool.

The rewards will be distributed quarterly to $ADS stakers. The rewards will be given based on an average staked over the snapshot window.
Node operators providing the bandwidth for the AlEx state channel will receive rewards in the form of $ADS and $DAG.

Additional incentives

In addition, as revenue allows, periodic payments of up to 25% of AlEx income from fees will be distributed to the bandwidth liquidity pool.

Accessibility

The L_0 $ADS token will be traded on the Lattice exchange allowing L_0 swaps for other assets listed and the LCX exchange, a fully accredited DEX. This will provide Alkimi Exchange with higher levels of liquidity.

In addition, access to the L_0 liquidity pools on Lattice will provide a market cap for the exchange. This will be based on the potential APY and the overall value of the state channel.

Listings for the ERC20 token, including the provision of UNISWAP liquidity, will be disclosed closer to the launch date.

$ADS tokens allow publishers in the future to monetize bandwidth with ads; rather than monetize ads with bandwidth.

Marketing

Overview

The initial focus would be encouraging engagement and conversation on well-managed channels on Discord and Telegram. Alkimi will use these channels to raise awareness amongst the potential investors and node operators within the community.

As we grow, our profile will launch officially to publishers at relevant industry events and evangelize our new means of trading ads digitally. We've assembled advisors from the most significant publishing businesses in the world to raise our profile at the C-Level across our future clients.

We are partnering with industry boards like the Internet Advertising Bureau (IAB), Association of Publishers (AOP), Premium Publisher Association (PPA).

We will also develop a community of engineers and future datapreneurs graduating from Higher Education building applications and solutions on the Hypergraph, intending to supply our clients with engineers trade to build on the Alkimi Exchange.

Summary

The Alkimi Exchange will provide the benefits of decentralized networks, DeFi and rewards to a programmatic advertising exchange. Our vision will allow for a cheaper and more efficient ecosystem, where all participants stand to gain by working together to create a fair value exchange.

We can build an exchange that can facilitate decentralized transactions in real-time and trustlessly—allowing for substantial cost savings due to lower reliance on cloud servers by using a state channel and HGTP to transfer and process large amounts of data.

The interoperability of AlEx with the broader Hypergraph ecosystem further strengthens our marketplace by offering an ample supply of liquidity, both financial and processing. It allows us also to attract a large number of resources via incentives mechanisms. This further strengthens the Alkimi Exchange by distributing the processing power, guaranteeing zero downtime, which can cost publisher advertising revenue.

Alkimi Exchange can redistribute wasted resources to areas that will create revenue for all market participants. As a result, transaction fees on the Alkimi Exchange are considerably lower than centralized privately-owned infrastructure. In this way, we can leverage DeFi markets in a way that has not been possible previously.

The Hypergraph also offers data validation and secure transfer of sensitive data. Alkimi Exchange utilizes this functionality to give users an immutable and verifiable record of every transaction on the exchange. This eradicates the need for 3rd party tracking of transactions due to the trustless nature of decentralization.

With the Alkimi Exchange's novel application of existing programmatic standards, the Hypergraph and DeFi, we can remove the paradox in digital advertising where the few capture revenue at the expense of every other network participant. This rent-seeking has caused many unintended consequences both in advertising and the wider society. Alkimi will reestablish the intended value exchange of the Internet, allowing publishers to be profitable and concentrate on the business of quality journalism.