

DATx Introduction

Initiated in early 2018 by Cosima Foundation with technical development support from Avazu, the DATx project was conceived as the solution to the pressing challenges faced by the digital advertising industry.

Digital advertising's evolution has come at the expense of internet users' privacy rights. Today's digital advertising industry is built upon an opaque market dealing in private user behavior data. This data is collected by advertisers, publishers, and ad platforms, yet users have no ownership over it. In addition, this data is stored in centralized storages vulnerable to hacking and leaks, putting user privacy at further risk.

Because every platform keeps their own centralized storages, a "walled garden" phenomenon results, with valuable data siloed off and isolated. This entails that even advertisers and publishers are disadvantaged in the current system, as they are unable to build cohesive and holistic user profiles without access to user behavior data from other sites.

Finally, even with the development of programmatic ads, without proper user feedback mechanisms and cohesive user profile sets, the full potential of automation is not realized. Without effective user incentive mechanisms and targeting, programmatic ads still do not bring user interest into the value chain.

To address these issues, DATx is dedicated to developing a unified protocol for the entire advertising ecosystem, as well as a complete operating mechanism for the establishment of an effective, efficient, secure, and sustainable advertising ecosystem.

DATx is committed to building a revolutionary blockchain based advertising ecosystem DATxChain, with decentralization as the foundation, artificial intelligence as the power engine, and DATx's POI (Power of Identification) initiative as the guide.

DATx Advantages

Unlike other digital advertising projects employing blockchain technology, DATx is developing its own DATxChain, tailor made for digital advertising, with a focus on achieving high TPS to match the high throughput of information in the digital advertising industry. Furthermore, DATx's strong partnerships both within and outside the digital advertising industry streamlines the project for widescale user adoption.

Since launch, DATx has worked closely with Avazu, an advertising platform with nearly 10 years of operational history. Avazu Private Exchange (APX), DATx's launch platform, provides a strong opportunity for wide adoption; APX is host to 1000+ advertisers, 3000+ high-quality media platforms, 200+ applications, and 10 billion in daily traffic. As user base size has an exponential impact on a project's viability and success in the digital advertising industry, the visibility and technical support provided by Avazu give DATx a strong competitive edge.

Aside from Avazu's resources, DATx has technical and strategic partnerships with a wide variety of blockchain projects. DATx's technical partnerships with QTUM (smart contract platforms) and aelf (cloud computing) provide DATx with cutting-edge technical support for blockchain development. DATx's strategic partnerships with blockchain projects such as CyberMiles (ecommerce), BitGuild and Game.com (online gaming), Rate3 (cross border transactions), Linfinity (internet of things), GIFTO (virtual gift giving), BitcoinWorld and BITV (blockchain media), etc. provide DATx the opportunity to explore cross-chain solutions for filling digital advertising needs in a variety of industries.

Technology

The DATx ecosystem is sustained by various key structures and incentive mechanisms:

- Centralized/Decentralized Hybrid Data Storage - Stronger User Privacy and Security
- User Attention Based Incentivization - Opt-In and Closed-Loop Feedback Mechanism
- Transparent Machine Learning Algorithms - Higher ROI and Marketplace Efficiency
- Decentralized Audit Trail and Payment System - Anti-Fraud and Transparent

The digital advertising industry requires projects to meet unique requirements: high throughput, high concurrency, and real-time response. As opposed to existing mainstream blockchain projects' generic one-for-all approach, we are proactively developing our own DATx blockchain to match these demands.

DATx Blockchain will innovate blockchain technology from following perspectives:

- 1) More flexibility in smart contract trigger mechanism and consensus protocol;
- 2) User-friendly development system;
- 3) Lower transaction costs;
- 4) Lower latency;
- 5) Better TPS performance;
- 6) Hybrid Model of centralized/decentralized data architecture;
- 7) "POI" - Power of Identification to balance data commercialization and user privacy.

DATx will build an open source platform, provide blockchain infrastructure for programmatic ad ecosystem participants, and increase their advertising effectiveness and ROI. DATx will especially focus on commercial scalability and make DATx blockchain an easy-to-implement, tailor fitted infrastructure for all relevant ecosystem participants.

The DATx ecosystem is sustained by the following infrastructure components:

- Incentive Mechanism: Based on interactions between users and ads/channels, the system regularly settles token accounts of users and channels.
- Token Exchange: Utilizing tokens, the system conducts transactions with higher efficiency and at lower costs.
- Behavior Information Storage System: User Behavior Profile Analysis data will be encrypted and

kept on blockchain, enabling secure and effective storage and access.

- **Application Platform:** Includes Applications that connect to DATx blockchain via SDK, including Web/APP.
- **Advertising Platform:** Advertisers can suggest ad delivery settings and view ad performance while Publishers can acquire ad SDKs and IDs to check performance. Performance analysis is recorded in the blockchain, with a decentralized mechanism ensuring fairness and transparency, ensuring ad and channel resources fully reflect and bring in higher value.
- **Big Data Feedback System:** This system will conduct user behavior information collection and big data analysis.
- **AI Recommendation System:** The system is powered by an AI algorithm engine to provide users precise and personalized ads.
- **Anti-Fraud System:** As an open advertising system, criminals may attempt to take advantage of the ecosystem. This system is in place to moderate and police the ecosystem to ensure the security of all parties.

Token

The native digital cryptographically-secured token of DATx (DATx token) is a major component of the ecosystem on DATx, and is designed to be used solely on the platform. As the system's digital asset, DATx token is a non-refundable functional utility token which will be used as the unit of exchange between participants on DATx. The goal of introducing DATx token is to provide a convenient and secure mode of payment and settlement between participants who interact within the ecosystem on DATx (e.g. end users, advertisers, and publishers).

There are three main forces driving DATx token circulation:

1. DATx token circulation on the ecosystem is powered by the DATx ecosystem incentive mechanism. The model is as follows:

- Users: DATx tokens are awarded to users for providing their behavior data and providing feedback. This includes: user engagement with ads, user evaluation of ads, user engagement time, user conversion behavior, etc.

The system will also distribute a small amount of incentives to individual users fairly and periodically, similar to lottery draws, based on active user interaction with DATx ads.

- Publishers: DATx tokens are awarded to publishers from accessing the ad SDK supported by the DATx protocol. Token rewards are awarded according to website traffic quality rating.
- Advertisers: Advertisers can purchase traffic by holding DATx token while referring to POS. Advertisers may obtain discounts on their advertising requirements by holding enough DATx token for a long enough time. The previous publisher could use the DATx token that was previously incentivized by the platform to continue to buy and sell ads in the DATx advertising system (the publisher becomes the advertiser's role at this time) to gain more users.
- Case Study: DATx token is now already circulating on APX, the first DATx launch platform.

2. DATx token circulation on the ecosystem is an integral part of supernode elections after the mainnet launch:

- Supernodes: To participate as a candidate in supernode elections, candidates must hold more DATx token than the specified threshold.

Once elected, supernodes receive DATx token incentives for their contribution to database storage.

- Voters: All token holders have the power to vote for supernode candidates, with voting power being proportional to the amount of DATx token they hold.

3. There are also DATx tokens reserved in the 'Foundation and Ecosystem Reward Pool' as well as 'Strategic Partnerships Reward Pool' to ensure the quality of DATx's long term project development.