

ITEGA

The Information Trust Exchange Governing Association



THE OPENSSEO PROJECT

August 9, 2021

OVERVIEW

ITEGA's OpenSSO project aims to build and deploy a sustainable business model for news publishers that enables them to have direct, trusted relationships with their communities, reliably generate advertising dollars and establish a platform for network subscriptions and content syndication.

WHAT

The OpenSSO Project will launch a shared content and advertising network for news publishers by supporting and governing building a prototype open-source federated single-sign-on (OpenSSO) and user data exchange (UDEX). The OpenSSO is envisioned to be an identity service that allows consumers to create and manage their privacy preferences with a single publisher and anonymously share those preferences across a publisher network, enabling the creation of a scalable, privacy-compliant and addressable 1st-party exchange of user data, the UDEX. The SSO will cut the "tail" off of private platforms, reduce the friction of individuals being forced to log into multiple news sites as they browse, eliminate duplication of views for analytics purposes, and allow publishers to authenticate and directly manage their relationships with users. Individuals in the network set their data sharing preferences, which attach to their identity as they browse news content across participating publishers. The UDEX will anonymize aggregate information collected about users and posted to an ITEGA-governed database, and will provide controlled access to participating news publishers and very limited access to approved third parties for advertising purposes. The UDEX will enable publishers to create privacy-respecting audiences of individuals, allowing advertisers to send ads in a brand-safe environment to high-quality cohorts of verifiably real people. Unlike the current ad-tech system, both the SSO and UDEX will be open source, transparent, auditable and accountable via ITEGA's governance role, and compliant with data protection laws.

HOW

Once built, the OpenSSO and UDEX will be bundled and deployed to up to 10 news organizations via one or more collaborating CMS and/or analytics and data-aggregation partners.¹ ITEGA will track and document metrics throughout the project, including user engagement and revenue generation, and report on the findings of the pilot at the project's conclusion.

WHY

While they enthusiastically support it, publishers have resisted participation in shared content and advertising networks like the one designed by ITEGA. They fear that changing their model could temporarily mean losing audiences and advertisers, and thus current revenue, and require added staff and technical knowledge to manage SSO and UDEX integrations. The OpenSSO project aims to alleviate news publisher concerns by piloting a system that is easy to implement and manage, compliant with privacy laws, and that delivers clear gains in revenue generation and user engagement.

¹ -- ITEGA has held discussions with Mather Economics, a subscription and data-analysis vendor to over 600 news organizations; and with [Newspack](#), an advanced open-source publishing, ad management and revenue-generating platform for news organizations that integrates with WordPress.



PROJECT GOALS

- 1** Build for news publishers an easy-to-adopt model for funding quality journalism through privacy-forward identity management, competitive contextual advertising and multi-site subscriptions.
- 2** Demonstrate core enabling technology for the sharing of users and content with one ID and one password across multiple, independent news websites, where the friction of multiple logins across sites is reduced, duplicate views for analytics are eliminated, and where privacy and identity are respected and managed for the user's benefit.
- 3** Help the public to regain control over their privacy and identity without damaging user experience. Deprecate the use of third-party cookies, pixel synchronization of multiple IDs, and third-party tracking.
- 4** Deploy a service that complies with European and U.S. data protection laws to reduce compliance costs for news publishers and improve privacy for users.

ACTIVITIES

- 1 BUILD.** A respected open source development firm will develop reference OpenSSO and UDEX services under an agreement with ITEGA. Both the OpenSSO and UDEX will be built using privacy-aware technical and functional specifications and the governance framework already created by ITEGA. Development may occur simultaneously, or sequentially, with OpenSSO available first.
- 2 DEPLOY.** OpenSSO and UDEX will include APIs customized for a group of pre-selected local news publishers, who may seek small grants from ITEGA or a collaborating foundation to underwrite integration expenses. ITEGA and our developers will support publishers as they integrate the technology, which will be piloted over the course of 3-6 months. ITEGA will work with partners to secure agreements from advertisers or underwriters to participate in the network.
- 3 MEASURE.** ITEGA will work with publishers to monitor key metrics throughout the deployment, including number of new and existing users, user logins and engagement, new subscriptions, CPMs and overall revenue generation.
- 4 REPORT.** ITEGA will analyze the findings of the prototype, make necessary tweaks or adjustments to the model, and write/release a report with findings, with the goal of recruiting a larger group of publishers for the next deployment.

FUNCTIONAL SPECIFICATIONS

OpenSSO

- Allow users from each participating publisher community to be easily authenticated at any of the other participating publisher websites.
- Allow for a system-provided or authorized API to indicate that a user has been authenticated, and will respond to data requests according to its understanding of their own user's privacy settings.
- Allow for sharing of user-permissioned attributes and logging of events by anonymized identifier for value exchange and third-party verification.



- Once authenticated, allow certain categories of information, as permitted by the user, to be shared among the other participating news organizations in a manner that can be audited by the user via their “home base” publisher.
- Include a transaction logging system that can support experimentation with various “payment” models such as, but not limited to, pay-per-view, dynamic (realtime) pricing, subscriber discounts, metered remote access, fee sharing, and event logging for aggregation and settlement.
- Provide a robust reporting protocol that will allow ITEGA to gather the data necessary to determine the success of the system and to compare different data-sharing policies and different remote-content access policies.
- Allow participating publishers to optionally adjust access rights and permissions for their services and users to create advertising or content affinity groupings.

User Data Exchange

- Support storage and updating by users of personal attributes and preferences at a most-trusted service provider, such as a publisher or other identity-service provider.
- Support publisher/agency/advertiser real-time user-permissioned requests for current unique user profile data.
- Support system-level logging of access events (ads/content) for value exchange and third-party verification.
- Avoid use, storage or aggregation of personally identifiable information.
- Deprecate the use of third-party “cookies” and limit use of first-party cookies.
- Compatibility with existing user data and content management systems (WordPress)
- Minimum attributes exchanged. EITHER: Dynamic (temporary) caching at auth service of user attributes, such as: first name salutation (if permissioned), zip code (if permissioned), “Home base” unique identifier, Subscription identifier(s), Credit auth. for single-item purchase (decrementable by auth service) OR: Access key to user attributes stored at service provider: Similar attributes as above.
- Must facilitate sharing/aggregation of user attributes, *when permissioned by the user*, for real-time ad serving (in principle no different than accessing other content; the ad server is a “content provider” who must be a participating member of the ITEGA-governed network).
 - Must enable periodic aggregation and settlement of access and payment records
 - Exchange does not play any role in setting pricing or commercial service offerings, just transferring data about them.

TECHNICAL SPECIFICATIONS

OpenSSO

(reference documents linked below)

[Service Features and Design Specifications](#)

[General SSO visual](#)

[RFP for NewsSSO/Local Media Consortium](#)

- ITEGA-ID issued by home base Data Collector
- ITEGA Authentication/Logging Service is created (ITE-ALS)
- User requesting service at ITE member site logs in with ITE-ID



- ALS starts “session” for that ID, temporary caches user persona info (from Data Aggregator) if authorized
Other ITEGA services check with ALS for service/access rights for user and persona if authorized
- Access reports logged to ALS/keyed to user’s ITE-ID

UDEX

(reference documents linked below)

[Functional specification for user data sharing](#)

[Prototype overview of UDEX project](#)

[Audience Profile Books](#)

- Ingests user attributes to participating publishers
- Allows user to see/modify/delete attributes
- Generate “Audience Profile Book” for each user identity manager
- Define anonymous user interest cohort segments within APBs
- Aggregates APBs into a network ITE Data Aggregator
- Offers advertiser agents (“Profile Usage Agents”) aggregated interest cohorts
- Agents provide ads to Data Aggregator
- Data Aggregator may use “server-side stitching” or a conventional ad server to serve ads

OUTCOMES

- Open-source API specification that allows participating organizations to integrate with the OpenSSO network and technical partners.
- Open-source API specification that allows participating organizations to log activities to be third-party verified and shared among other organizations.
- Open-source API that implements the server-side of the APIs to provide the necessary functionality.
- Demonstration of the OpenSSO and UDEX with participating news organizations to show access methods and transactions using varying privacy settings.
- Public report with findings from the pilot, including a technical and policy roadmap for implementation for news publishers.

TIMEFRAME

September 2021: Begin development; identify participating publishers and ad ecosystem vendors/associations

December 2021: Completion of development; integration support for publishers

January 2022: Deployment via tech partners; ongoing support for publishers

Dec. 2021 to April 2022: Tracking metrics

May 2022: Report findings of pilot; tweaks to technology as needed; sign up new, larger cohort of publishers



PROPOSED BUDGET

Development SSO	\$150,000
Development UDEX	\$200,000
Bundle and Deployment	\$250,000
Competitive grants for 10 news organizations to integrate	\$200,000
General operating/project management (ITEGA)	\$320,000
TOTAL	\$1,120,150

BACKGROUND

The evolution of the digital-advertising technology services sector, along with declines in print revenues and other factors, have dramatically eroded the ability of America's news organizations to sustain journalism that matters for democracy. Unwanted or opaque surveillance and data collection at the hands of multi-sided platforms, data brokers, and advertisers has alarmed the public and decreased trust in the digital world. Private platforms have cemented their dominance in online advertising and content distribution by matching digital identities to their vast data stores, fundamentally altering the ability of news organizations to monetize their audiences through direct relationships.

As we lose more and more news publishers across the country, the cost is dire: community voices are diminished as is the ability of citizens to hold public officials accountable for their policies. As privacy-violating digital advertising practices continue unabated, individuals are treated as data points with little to no autonomy, agency, or rights.

We think the solution lies in news publishers working together in a shared content and advertising network that is dedicated to privacy, transparency, and accountability. Since 2018, ITEGA has convened and listened to key voices in advertising, journalism, technology and advocacy to develop a comprehensive governance and trust framework, as well as all of the technical and functional specifications, for the network we envision: an open source single sign-on for the federated authentication of users and a user data exchange to allow for permissioned advertising, all designed specifically for news publishers.

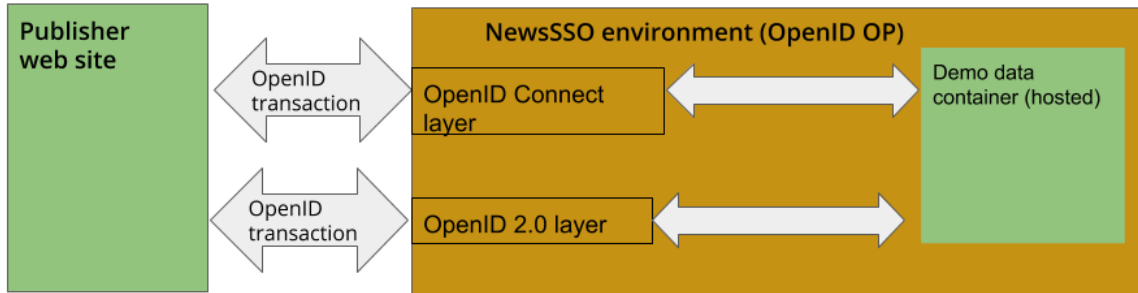
TEAM

ITEGA was founded by **Bill Densmore**, a tech entrepreneur with deep experience in journalism, publishing and technology. ITEGA's consulting team includes **Jo Ellen Green Kaiser**, a media and project management consultant who was previously executive director of The Media Consortium and who currently runs JGKSF Consulting, where she supports independent media to connect mission to money; **Michelle De Mooy**, a privacy and data consultant who was previously the Director of Privacy and Data at the Center for Democracy & Technology and who brings a background in public policy, advocacy, strategic communications, and software engineering; **Eva Tucker**, communications consultant who is founder of Human Design, a company that implements technology tools to connect people in meaningful ways. Advising technologists include **Don Marti**, VP of ecosystem innovation at CafeMedia, former consultant to Consumer Reports on the CCPA's "authorized agents," former open-source strategist at Mozilla and editor of Linux Journal; **Graf Mouen**, a data management and categorization expert formerly with Disney/ABC News and **Brendan Riordan-Butterworth**, an independent expert on advertising technology, identity and security, formerly senior director of technical standards at the IAB Tech Lab and a Microsoft veteran.



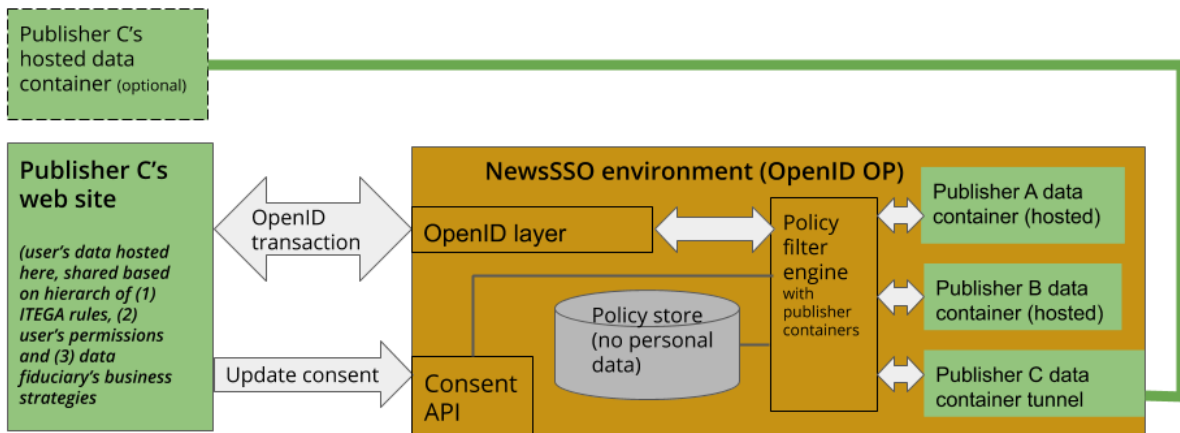
CONCEPT DATA FLOWS

Demo 1 version



Green boxes: data controller (publisher)

Gold boxes: processor/service provider (NewsSSO)



Green boxes: data controller (publisher)

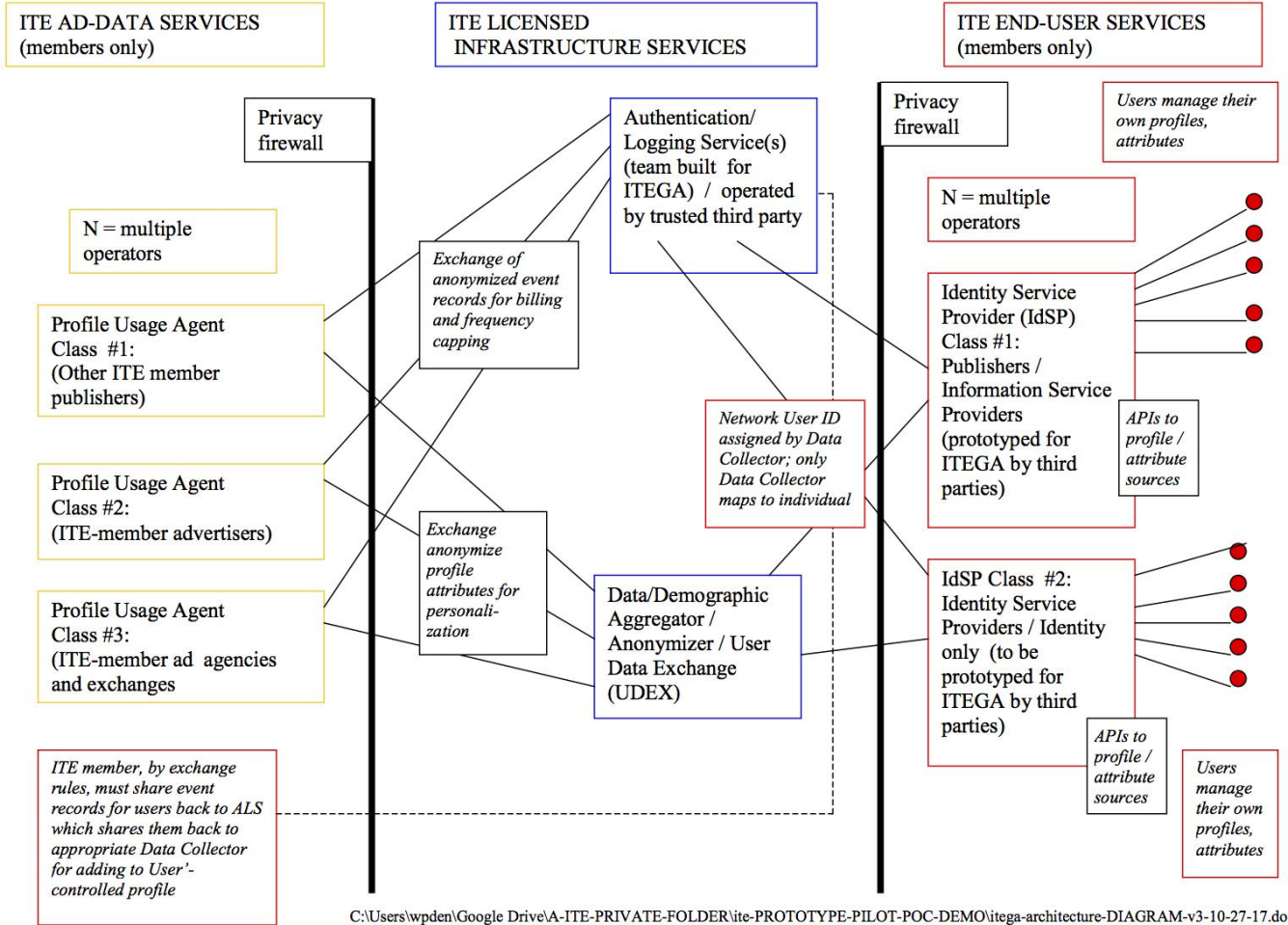
Gold boxes: processor/service provider (NewsSSO)



	Client side (user browser/device)	Server side (publisher/network)
Make low-value ads harder	<p>Layer 1: block connections to untrustworthy trackers</p> <p>Layer 2: don't persist cookies and unsafe state</p> <p>Layer 3: clean up problematic state (layers)</p>	<p>Safe ad blocker warnings: don't block privacy tools as ad blockers.</p> <p>Surveillance warnings: Inform users about alternatives so that they can configure in-browser surveillance protection.</p> <p>Reverse tracking walls: offer bonus content to protected users.</p>
Make high-value ads easier	<p>Attribute assignment with user control</p> <p>Cross-site attribute sharing with user control</p>	<p>ITEGA attribute sharing</p> <p>Safe web analytics</p> <p>Future: federated paywalls</p>



Information Trust Exchange Ecosystem Architecture



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