Infotrust eXchange

The Information Trust Exchange
Governing Association [1]

Making the market for digital information:
Identity . . . privacy . . . payment

SUMMARY
LAUNCH PLAN

"It's the biggest crisis facing our democracy, the failing business model of real journalism."

■ U.S. Sen. Claire McCaskill, D-Mo.,
quoted in the New York Times, Nov. 7, 2016

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[1] -- An independent, nonprofit, public-benefit corporation formed Jan. 30, 2017 in the State of California. See the Articles of Incorporation.

PROBLEM

Our society faces an epidemic loss of trust:

- Trust in the ability of government to work for everyone.
- Trust in the sustainability of communities
- Trust that the future will be better than the past
- Trust in the veracity of facts in science, and media

The Information Trust Exchange Governing Association's (ITEGA) mission addresses specific aspects of trust in the digital-information world by:

- Helping members of the public to safely manage their privacy and identity
- Sanctioning technology and business frameworks where quality content can thrive
- Fostering open and public access to digital information, both free and paid

By helping restore trust in information, ITEGA creates a media climate for restoring trust in participatory democracy.

SOLUTION

ITEGA's solution is a share-user network for trust, identity, privacy and information commerce for the Internet. It is a "third-way" approach not controlled by government or private enterprise.

Goals of the ITEGA:

- Bring publishers and other civil-society organizations into a public-benefit, nonprofit collaborative for governing user identity and privacy on the web -- much as ICANN manages domain names.

- Foster and govern privacy-by-design technical and business rules that standardize how users control and apply their "identities" in advertising and content personalization.

- Help publishers to improve the relevance and value of advertising and customization through deeper knowledge of their users interests and needs.

- Sanction competitive services for the exchange of value for content which include methods for expanding free access by underserved communities to the civic information needed to foster self government.

WHO IS ITEGA?

ITEGA is the result of several years of research supported by the Donald W. Reynolds Journalism Institute, including:

- Meetings and work of four task groups totaling 40 members during 2015 and 2016.
- Ongoing discussions with key collaborators at Mozilla, the Reuters Institute, Hearst Corp., Digital Content Next and elsewhere.
- Protoyping by several technology companies

WHAT'S NEEDED NOW

ITEGA needs $200,000 over the next six months to:

- Refine and deploy governance and membership dues/support structure
- Stand up available tracking protection analytics and tools for publisher sites
- Prototype a privacy-by-design user data exchange that supports ad serving by anonymous interest cohorts (eliminating the need for "third-party" cookies).
- Expand application of cross-site user identity management
- Demonstrate news customization that allows users to manage profiles and identify trustworthy content.

WHO TO CONTACT

For additional information, and to respond, please contact:

Bill Densmore
Consulting Fellow, Donald W. Reynolds Journalism Institute
Interim Executive Director, ITEGA
Mobile: 617-448-6600
wpdensmore@gmail.com

More about the ITE mission, participants and planning are on its interim blog site:

MISSION:	https://informationtrust.wordpress.com/mission/
HISTORY:	https://informationtrust.wordpress.com/mission/history
WHO:	https://informationtrust.wordpress.com/who/
PLANNING:	https://informationtrust.wordpress.com/work/
NEWS:	https://informationtrust.wordpress.com/news/
TASK GROUPS:	http://newshare.com/ohare/ite-task-group-assignments.pdf

Background

There are ongoing calls for new business models for news. Experiments, prototypes and early-stage ventures separately address key features of a new news ecosystem. But they are generally uncoordinated. Other than "sponsored content," little has emerged. **It's time for an audacious, collaborative initiative.** There's an opportunity to coordinate (rather than re-invent) services to improve user experiences addressing personalization, identity, privacy and payment.

An important reason why legacy news organizations may have failed to embrace some protocols and platforms may be because those platforms were dominated or controlled by a for-profit, investor-owned entity. Either this engendered mistrust from the very start among parties who aren't sure whose interests were paramount (such as Microsoft Passport), or the equity owners reached irreconcilable differences (as with New Century Network and NewsRight). That's not what the ITEGA will do. The coordination of global identity, privacy and payments should ideally not be done by governments nor by a single, private, exclusively profit-driven entity.

To have the best chance at achieving operational scale, the ITEGA will tightly focus in a proof-of-concept phase on fostering consensus on the minimum necessary protocols and associated business rules to establish an open and low friction marketplace for digital information. Thus the ITEGA will create and certify an trusted marketplace – a public bazaar -- for information exchange.

ITEGA estimates it will require $500,000 over two years to test and confirm feasible operation of sanctioned, commercial services that operate in compliance with ITEGA member rules governing identity, privacy and information commerce. ITEGA will then be sustained by member dues and licensing fees which support ongoing research, governance, certification, compliance and rulemaking.

Operations will be undertaken on a business basis through commercially reasonable arrangements between private network service providers and their customers. ITEGA will be empowered to set terms for issuance or withholding of a unique global publishing member or service member network ID required to do business within the ITEGA ecosystem.

ITEGA's board will strive to govern like ICANN[2] for identity -- or a Visa for information commerce. It will make rules about the sharing of user profiles, and the exchange of value for advertisements and content. Then it will grant contracts to private entities to run networks and services. These services will be able to share user data using standard protocols, kind of like members in a stock exchange. The ITEGA will receive funding through grants or member service prepayments, to over proof-of-concept testing and operations.

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[2] -- The Internet Corporation for Assigned Names and Numbers is a California-based nonprofit which governs domain names, and operates the Internet's root domain-name server, charging competitive private registrars to use it.

With the ITEGA established, entrepreneurs can be funded to run services across the ITE ecosystem. A good analogy might be that we are building a combination of free and toll roads for the information superhighway -- entrepreneurs will then be able to build better services -- vehicles that run on the roads and developments near exits -- to more money than if only local roads existed.

Research reports

The groundwork for this proposal is set forth in two RJI research reports in 2011 and 2015, "From Paper to Persona" (2011) and the more recent sequel "From Persona to Payment" (2015).[3] Key points of the 2011 and 2015 papers:

- Mass-market advertising won't sustain traditional journalism

- New revenue streams are needed

- A promising opportunity is for news organizations to become stewards and curators of individual user's 'persona' and information needs; earning subscription and transaction fees by doing so.

- A network is needed to maximize the value to consumers and revenue to the news industry. The network needs to be trusted by competitors.

- The best way to assure such a neutral network is for it to be created by a non-stock, public-benefit organization.

EDITOR & PUBLISHER, April, 2015
http://newshare.com/ite-key/future-personalized-news-E&P-densmore.pdf

Both papers call for the creation of a public-benefit organization help create and govern – but not own or operate – a shared-user network for trust, identity and information commerce layered atop and supporting the existing World Wide Web – a functional extention of the domain-name service, ICANN. The network, or exchange, would:

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[3] -- Available from http://newshare.com/report.pdf

- Develop technical and information-service protocols and business rules

- Allow end users to own, protect — and optionally benefit by sharing — their demographic and usage data, with the help of their competitively chosen information broker or agent ("information valet") – such as their local newspaper.

- Provide a platform for customizing and personalizing the end-user web experience – a "news social network."

- Update the role, effectiveness of, and compensation for online advertising and marketing services beyond the mass market, while putting greater control of user privacy in the hands of users and their most-trusted publisher or identity service provider.

- Allow digital users to easily share, sell and buy content through multiple websites with one ID, password, account and bill.

A more detail launch plan includes the following:

PART ONE:
- A marketplace overview
- Objectives of the Information Trust Exchange Governing Association
- Marketplace and operating assumptions
- Design principles and operating requirements

PART TWO:
- Stakeholder experiences
- Implementation components
- Operating technologies
- A short-form Request for Proposals

PART THREE:
- Phased Implementation Steps
- Resources required (money, people, partners)

We may now be at an inflection point where legacy news organizations realize they simply cannot continue to exist in silos, they must adopt common technologies, business rules and standards for managing user identity, privacy, trust and information commerce if they want to have the scale of the platform companies such as Google, Facebook, Apple and Amazon. The challenge for news and other publishers is not one of technology, but of coordination.

In a report, "From Persona to Payment: A Status Report on the News Ecosystem, and a Challenge to Create the Next One," RJI fellow Bill Densmore reaches two conclusions:

- *The news industry lacks a system for variable pricing and exchange of individual items of news content in real time. Yet in the last 10 years, the advertising industry has innovated sophisticated "programmatic" technologies that allow in milliseconds the variable pricing, bidding, selection, tracking and billing of advertisements to targeted, unique consumers.*

- *The news industry also lacks a common system for single-signon or user authentication across multiple news websites. Yet in the last 10 years, Tier 1 U.S. universities running on the Internet 2 network have used open-source Shiboleth and SAML trust technology to achieve single login across 100 independent campuses and institutions.*

The original architecture of the Internet identified connected machines by something called an IP number. But it provided no method for exchanging the identity of individual users. User names and passwords provided an initial solution. Then Netscape Communications Corp. invented "cookies" – the idea that a tiny file on your computer could associate your computer with previous activity. Banks and new financial-service companies introduced ways for using credit cards to purchase online. User names, cookies and credit-card numbers have enabled remarkable services and features. They have turned the Internet from an academic and military experiment into a vital information superhighway of commerce and convenience. But they have also created challenges to user privacy. And payment services don't yet economically work for aggregating small bits of information from many sources into a personalized service.

Meeting today's challenges: Identity, privacy, payment

The Internet Corporation for Assigned Names and Numbers met the challenge of providing a global addressing system for the Internet. The Information Trust Exchange Governing Association meets the new challenge of global standards for managing identity, privacy and --- ultimately -- information payments. As a nonprofit, non-stock entity, it develops standards, protocols and business rules, and licenses operation of authentication and logging services –

data exchanges – by one or more commercial operators that are certified compliant with those standards, rules and protocols. It has no direct relationships with public users of the Internet. It facilitates but does not itself engage in news or advertising services. Its role will include these functions:

- Establish governance structure

- Facilitate board formation, membership

- Charge licensing, certification and member fees

- Fund protocol and standards development

- Research, test, commission key technologies

- Create voluntary privacy, trust, identity standards

- Protect privacy: Anonymous, yet trusted users

- Sanction protocols for sharing users/content and license their use

- Sanction multi-site user authentication services
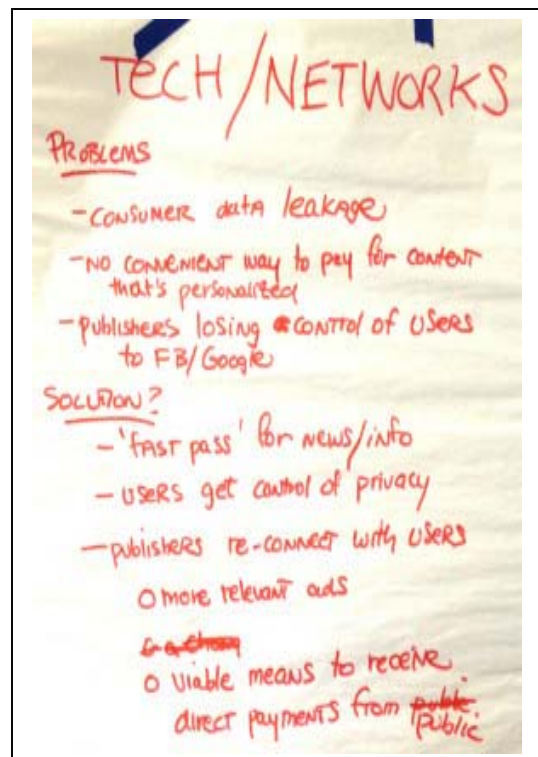
- Facilitate web-wide microaccounting/subscriptions

- Support "atomized" content, wholesale/retailing pricing

- Broaden "deep web" access; not on web today

- Support ad serving by anonymized user cohorts

- Enable consumer choice for commerce, privacy

  - One account, one bill, one ID, purchase anywhere.

  - But no single owner of all users

Stakeholder experiences

Prototype versions of ITEGA-sanctioned network services are to be designed for both industry and public stakeholders:

They will be designed so that news and other publishers can:

- Grow audiences
- Increase revenue (monetize off-site content, higher CPMs from non-subscribers)
- Deepen user relationships (greater impact; ROI goes up)

They will be designed so that public users:

- Efficiently find helpful and relevant information personalized to their interests/needs
- Find such relevant information faster and easier
- Have new and better control over their data and identity
- Increase their connection with geographic and topical communities
- Find the service valuable enough to pay something by subscription or per-click

In the process, news organizations will:

- Learn what it takes to aggregate content automatically and efficiently
- Collect and share user data/behavior on a "permissioned" basis
- Receive data about their users who leave their site or service
- Receive anonymous data about other's users who come to their site/service from elsewhere

Proof-of-concept testing will:

- Track user data and collect analytics (not use cookies except for state management)
- Test advertising delivery by anonymous cohorts
- Test networked subscriptions
- Personalize content
- Evaluate and analyze results

Operating technologies

Nine modules comprise the essential operations of the Information Trust Exchange ecosystem:

- Three are shared services;

- The rest are provided to ITEGA member publishers and service providers or by one or more technology vendors.

They may be prototyped by one or multiple partners, vendors or members. The eight are listed below, with preliminary information about perceived options as of January, 2017. A preliminary selection of best and alternative options for key operating technologies may be found at this link:

https://www.dropbox.com/s/yoja7s1o9xe0zj7/ite-poc-testing-options-elements-v2-09-22-16.xls?dl=0

SHARED SERVICES RUN UNDER LICENSE TO THE ITEGA

1. **Network user authentication services** – This is a core feature of the ITE ecosystem – a method for "federated authentication" that allows an end user to be recognized and provided variable view, listening, access or payment rights and multiple independent web services. Over two decades, several well-understood, open-standard services have evolved for this purpose; ITE simply needs to select and enhance one with the ability to pass encrypted user data in standard formats.

2. **Event/access logging service** -- When an information resource is accessed by an end user – viewing an ad, reading an article, watching a video, listening to a podcast, an HTTP "event" is logged not only at the website providing the service, but also to a shared network service operated by one or more ITEGA-licensed vendors. This service is the second core component of the ITE shared-user network.

3. **Aggregation and settlement services** – The accumulated logging by the shared service of network events are sorted and aggregated by user service provider, by publisher or by data user (such as an advertiser or ad network) for settlement of debits/credits among the network members. Settlement is "notational" – it is not a banking or currency function. The results are both detailed and summary reports to publishers for royalty payments, and to service providers for purchase of content, for advertising charges and advertising revenue and to network participants who may be accruing transactional fees. Multiple examples of such aggregation and settlement services exist in banking, telecommunications, ad-tech, music and affiliate marketing and may be adapted to the ITE ecosystem.

ITEGA-CERTIFIED THIRD-PARTY SERVICES

4. **Advertising exchange service** – The just-announced TrustX service of the Digital Content Next trade association appears well positioned to disrupt the ad-technology stack with a non-profit service-bureau approach.

5. **A profile-exchange service** -- Enables access to and network sharing of user attributes for the purpose of determining types of services and their value to be provided to a user; and which is capable of varying services based upon such parameters as subscription-authorization levels and credit thresholds.

6. **Billing services** – Upon receiving notation of aggregation and settlement, publishers or service providers may direct bill or contract with agents to do billing. Multiple examples of such billing services exist in banking, retailing, travel and technology and one or more will be selected for the ITE ecosystem.

7. **Publisher content access control** – Offered by multiple vendors, or home-brewed by publishers, but dynamic pricing is rare and access options tend to be relatively inflexible. The challenge here is to build standards for cross-publisher interoperability and event reporting. Examples in news publishing include Clickshare, Piano Media and MediaSpan.

8. **End-user content personalization services** – With a few exceptions, such as Cxense and LifeStream/Taxonometrics personalization tends to be a direct-to-consumer service from tech platforms rather than a white-label provision for publishers.

9. **User identity data and privacy management** – This is new, emerging category that can be provisioned by publishers who wish to manage data and privacy for their users, or by specialty providers of this service such as RespectNetwork. The ITE ecosystem requires that use end user have one or more designated "home bases" that either manage profile and usage for them or allow them to do it themselves. The network then exchanges user-permissioned data.

ITEGA -- FAQ

1.   **What are we trying to accomplish?** Make a marketplace for digital content -- convenient for the public, that allows personalization and respects privacy. A platform for content collaboration.

2.   **Who are the customers?** B-to-B: Primary: News and digital content originators; Secondary: Advertisers, telcos, cable companies, retailers, associations. Goal: Help them deliver an incredible user experience through greater personalization and trusted privacy and identity management.

3.   **Who are our partners?** Technology and publishing companies who will join the ITE and provide ITE-complaint services.

4.   **What do we do for our partners?** Foster creation of a platform that enables a marketplace for them to make money through advertising, digital content sales and transaction fees.

5.   **What is the role for RJI?** Provides ideas and contracted support services as requested by the ITEGA board.

6.   **What is the solution?** Based on 2011 and 2015 research reports, and O'Hare gathering proposed solution is a non-profit consortium which develops business rules and technical/design specifications for a "shared-user network for trust, identity, privacy and information commerce." Elements include:

    a. One-ID, one-bill account
    b. Choice of service providers
    c. Control of use of personal information
    d. Personalization options for content and ads enabled by vendors
    e. *A la carte* and bundled content purchasing; competition in pricing.

7.   **What will sustain the ITEGA governing organization?** Initially grants, them membership dues, then license fees from operators of network services (authentication, logging services).

APPENDIX B

Implementation considerations

Here are seven considerations for the proof-of-concept development stage of the Information Trust Exchange components. They involve outreach/marketing, governance, membership, funding, user interface, identity management, data exchange, cohort management, content management, service management and payment management.

1. Legal/corporate form/governance

- Draft mission, key objectives
- Select corporate form(s); single or dual entity approach – profit/non-profit
- What is the governance? How are decisions made about who gets admitted?
- Participation rules?
- Described practices required to respect antitrust laws globally
- Assess/explain vs. comparables: Bluetooth, Cable Labs, NCN, NewsRight, etc.
- Determine how to handle an intellectual-property rights issues
    - Are there any patent issues?
    - Who owns any unique intellectual property created?
- Payment guarantees and liabilities –- who bears
- Should this be trade association to mitigate all the legal/liability issues?
- What is role of traditional journalism entities?
- Collaborate with privacy/demographics/identity task group

2. Technology

- Work with other task groups on mission, objectives
- Assemble list of operating requirements including:
    - Single-sign-on and network authentication
    - Dynamic, real-time, competitive object pricing
    - Exchange of user data regarding query threshold, markup, usage rights, PII, preferences
    - Off-Internet aggregation, billing, settlement
- Develop draft RFP for network operators
- Payments exchange – methods, timing, operational funding
- Credit/risk issues / especially physical vs. intangible goods

3. Revenue Streams – Consumer direct

- Subscription, per-use, single site, affiliate networks
- How does the economic status of user affect access?
    - Study/propose "library pass" feature to address digital-divide issues

4. Revenue Streams -- Advertising / "advisortising"

- Investigate relationships with programmatic exchanges, brokers
- Understand "two-way" nature of service – facilitate pay users to view ads?
- Describe ITE role in advertising by moving money around ecosystem
- Articulate all feasible revenue streams – advertising, "native", commissions, etc.
- Is "advertising" too limiting term in niche-market future? "Advisortising"?

5. Marketing strategy / B-to-B and B-to-C

- Figure out staging of ITE launch / what is "minimum viable service?"
- Is this marketed B-to-B or B-to-C or both? In what sequence?
- Affiliate vs. direct marketing challenge / market-requirements document
- Dual go-to-market strategy? Big network vs. incremental testing
- Define the rewards system is for consumer users
- Invent/define terms/brands –- name of agent (news organization) vs. name of the operating service.
- How to position the news organization as a information repository handler (trust/privacy)
- How to co-operatively market value of "atomized" content

6. Privacy/demographics/identity

- Stress transparency, end-user focus in all respects
- Define, use/ownership/custodianship of personally-identifiable information (PII)
- Use, ownership, exchange/repurposing, use of aggregated, non-PII
- Describe framework for valuing exchange of PI I
- Propose a framework for rules (example: OECD Privacy Principles)
- Rules about use of information collected in service; what if companies go out of business; is information asset of company.
- Literature review on ownership of identify; opportunities and liabilities of being "custodians" of peoples' personal information. Is there a core of information that can't – or shouldn't -- be traded/sold?
- Collaborate with legal/corporate form/governance task group

7. Content support

- Identify and engage early adopters
- Who does the "trust" filtering? Is the ITE a filter, or a neutral pipe?
- Describe system for distributed, independent, competitive content pricing
- Pricing by article, subject, domain, phrase, concept?

- Support variable pricing based on time, market, user metrics?
- Recognize that advertising is content too because it attracts readers -- e.g., CraigsList and so-called "native" advertising.
- How to get money in hands of people who create "atomized" content (non-subscription) such as free-lance writers
- Determine what types of content are going to be involved:
  Examples: News, academic, medical, legal, other trade/niche, music, audio, video/movies, self-help, games, databases, other multimedia?
- What standard metadata protocols are required?
- Who is going to provide content? Traditional media? Individuals? Both
- Is this processing of content (service) rather than owning content (product)?
- How are IP rights in content affected, assured, controlled?