

Making the new digital market: A case for the Information Trust Exchange

DRAFT, January 23, 2015

- **PROBLEM – No viable way to sell content on the web**
 - Services are proprietary, inconvenient, expensive
 - Solution requires collaboration on federated authentication
 - Also requires ability to aggregate charges among multiple sites
 - Google, Facebook, Amazon, Apple could “make rules”
 - But their leadership would be opposed by others

- **SOLUTION – Public/industry collaborative establishes framework**
 - Make/create a free, open market for digital info exchange
 - Like Visa, ICANN, 60-cycle power, railroad gauge, FAA, N.Y. Stock Exchange
 - Non-stock, membership, possibly PRIs
 - Can start, invest in or contract with for-profits
 - Self-sustaining through transaction fees

- **CONVENOR – Reynolds Journalism Institute at Univ. of Missouri**
 - Ground work laid (“Blueprinting the InfoValet Economy”)
 - Run from “neutral turf” – the Midwest
 - Mizzou has “chops” in journalism (RJI) and telecom
 - RJI has capacities to host operation
 - Mizzou Advantage facilitates law, business, IT, journalism collaboration

- **TASKS – A safe haven for collaboration / standard-setting**
 - Careful avoidance of antitrust problems
 - Enable dynamic pricing competition, mixing “atomized” content
 - Extend OpenID to include transfer of “persona,” commerce
 - Specify transfer protocols; “box car”
 - Specify base terms of service for public users
 - Establish info exchange rules (like stock exchange)
 - Certify compliance (like Underwriters Laboratories)
 - Managing cross-licensing (like BlueTooth Association)

THREE ROLES FOR THE THE INFORMATION TRUST EXCHANGE

<http://www.infotrust.org>

The Information Trust Exchange would be a free-standing non-profit member association supported initially by membership dues, grants or program-related investments (PRIs), and later in part by licensing fees. Its mission:

“A public-benefit entity to lead creation of a free market for digital information. It builds on standards, ensures consumer choice and trust, and enables price and service competition. It is broadly, and openly, governed, with a global perspective. The operations it sanctions first benefit journalism, democracy and freedom, ahead of private interest.”

The three roles for the ITE:

1. Champion journalism's value (VALUES)

- Lead research and documentation "that journalism matters." This notion does not require everyone to agree on solutions but merely to agree that ***solutions are needed.***

2. Make the marketplace for digital information (PLATFORM)

- It would develop technical and business standards and protocols to enable a open digital marketplace for sharing users and exchanging information, including news.
- It would contract with one or more for-profits that would operate aspects of the marketplace.
- It would in turn spawn, and perhaps in some cases have equity positions in, for-profits such as CircLabs or ANDAC.
- The non-profit would receive revenues from its equity positions, or through license fees or other agreements with the for-profits.

3. Foster tech-transfer from academy to practice (INNOVATION)

- Create a national social community among news/journalism related info-tech innovators and help them to share and apply ideas and reduce duplication. Track and report in a disciplined way on innovation, and develop metrics for deciding which ideas are scalable, sustainable and meet community needs.
- Focus on journo-tech innovation that enables people to *act* as citizens, by bringing traditional journalists together with new-media entrepreneurs and engaged citizens to seed journalism's new framework.

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This white paper highlights the urgent challenge for journalists to find a way beyond mass-market advertising to underwrite – and profit from -- the free flow of civic information. It suggests business opportunities for entrepreneurs. Trust, identity and commerce are the core issues, affecting convenience, privacy, personalization and advertising. Some of the issues have been addressed in other venues by the credit card and telecom industries. It calls for establishing a new collaboration among news, publishing, entertainment, technology and philanthropies called the "Information Trust Association." The intention is to seek the best knowledge about analogous historical practices, and then convene and foster the right solutions for the future. While many of the conveners of the ITA would come from the perspective of journalism's vital role in sustaining participatory democracy, the challenges and opportunities affect the nation's public information infrastructure broadly.¹ A bullet-point summary of the ITE creation rationale, and a summary of its three roles, follows the paper narrative.

PART ONE: A new overlay for the Internet

The Internet needs a user-focused system for sharing trust and identity, and for exchanging and settling value (including payments), for digital information. The system should allow multiple information agents -- Or "infovalets" -- to compete for and serve customers with varied topical interests and appetites for demographic sharing. It needs a free, open market for digital information -- and attention. We need to start creating a collaborative ownership and governance framework, assemble the required technology, and assess the impact on law, regulation, advertising, competition and privacy.

In late 2008, as the result of a symposium at the University of Missouri's Donald W. Reynolds Journalism Institute, we called for creation of a Journalism Trust Association (now renamed, "Information Trust Association") to sustain,

In a story about the Project on Excellence in Journalism's 2009 "[State of the News Media](#)" report, Time Magazine's M.J. Stephey [concluded March 16, 2009](#):

" . . . [I]f solutions aren't obvious, the report's overall message is: Will the future leaders of journalism please, please stand up?"

It's time for the nation's news creators, aggregators and technologists to do so -- together.

¹ -- This document is adapted from and expands upon testimony given by [Bill Densmore](#) on Dec. 2, 2009 at the U.S. Federal Trade Commission Workshop: "[From Town Crier to Bloggers: How Will Journalism Survive the Internet Age?](#)" Densmore was part of a [panel](#) entitled: "The New News." ([WORKSHOP COVERAGE](#))

update and enrich the values, principles and purposes of journalism through collaboration among news media, the public and public-focused institutions. Major technology, publishing, advertising, consumer and philanthropic organizations should underwrite ITE. It would guide the creation of new standards and a platform for exchange of user authentication and transaction records which enables a competitive market for information, respecting and enabling consumer privacy and choice."

The unique challenge for news

The defining challenge for news organizations in the 21st century is no longer managing proprietary information, but helping the public manage *our* attention to ubiquitous information. In less than a decade, we have moved from a world of relative information scarcity -- access restricted by a variety of technical choke points -- such as presses -- to a world of such information abundance that the average user's challenge is not how to access information, or even how find it, but how to personalize and make sense of it.

The Internet as we know it today is not up to this task. To unleash a new user-driven attention economy, the next-generation Internet needs a common platform for sharing user trust and identity, one which explicitly values and allows us to share or shield our persona, and makes a market for digital information in the classic retail-wholesale model. In such a world, the new news organizations will thrive, but they will become conveners and aggregators as much as original content providers. They will have a new way to exchange value for information and to participate in trust relationships.

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SLIDES: [FRAMEWORK FOR A NEW NEWS ECOLOGY](#)

"What's needed is a platform -- a shared-user network -- for managing trust, identity and information commerce as an optional and vital enhancement to the Internet. It would be a public market for the sale and sharing of digital information, useful to individuals, institutions, government, publishers, entertainment companies and other infotech enterprises."

This system . . . platform . . . clearing house . . . should uniformly exchange payments for the sharing of text, video, music, game plays, entertainment, advertising views, etc., across the Internet. It could, for example, manage background -- wholesale -- payments for content that is repurposed for advertising gain by bloggers, collecting, sorting and settling copyright and other value exchanges among users, publishers and aggregators.

An information ecosystem breakdown

ITA can address an information-ecosystem breakdown. Almost the entire spectrum of information enterprises, not just the news industry, faces critical challenges going forward because the traditional mechanics of paying for journalism are undergoing an unprecedented transformation. The outcome may not be the end of journalism's values, principles and purposes. But journalism *as we know it* may need to become more efficient, or be performed by different people and institutions. Mass-market advertising alone does not appear capable of supporting independent, civic journalism in the web environment.

Marketers increasingly seek a one-to-one relationship with consumers, and are willing to pay for it. In the last year, news organizations have concluded they must deliver some new services valuable enough that people will pay for them conveniently. But there is not consensus on the mechanics of how to authorize, account for and charge for bits of information accessed from multiple, independent websites. The Internet was developed by the defense and educational establishments to withstand nuclear attack. It is wonderfully efficient openly delivering information. What's needed is a platform – a shared-user network -- for managing trust, identity and information commerce as an optional and vital enhancement to the Internet. A public market for the sale and sharing of digital information, useful to individuals, institutions, government, publishers, entertainment companies and other infotech enterprises. One might be a service where, like the mobile phone, you have a unique identity, which authorizes use of resources across multiple providers and includes a means of micro accounting. That does not exist on the web today. It is an enormous opportunity and need.

Google Checkout or PayPal handle commerce, but not identity. Facebook is moving to handle identity, but is not likely to be trusted for commerce, and faces looming regulatory scrutiny. And none of these players have a connection to civic information or journalism.

What an Information Trust Exchange would do

The Information Trust Exchange would transparently make policy, foster -- and in some cases manage -- platforms and protocols for the trusted sharing of users, content and commerce -- perhaps modeled after the former non-stock Visa International Services Association.

Elements of the publishing and information industries are converging and evolving such that no existing trade organization, by itself, has the credibility to make broad policy that sticks. What's needed is a new non-profit association that handles trust from the perspective of the needs and privacy of users, journalism, publishing, entertainment, finance – and perhaps even health. Very generally, this R&D collaborative will need to address issues of content ownership, copyright protection, personalization, privacy, advertising and content payments in a networked media environment. Solutions that are broadly applicable across journalistic, publishing and entertainment enterprises will require the existence of a neutral organization that can responsibly address and mitigate antitrust issues. Think of it as akin to establishing the gauge of the railroad, or the grid frequency of alternating current, but not the size of boxcars, the schedule or price of freight, or electricity.

Entrepreneurial opportunities

Vint Cerf and his colleagues engineering and specified TCP-IP as the standard protocol for moving bits and bytes across the Internet and established a grid and gauge that has been a foundation for higher-level innovation and “network neutrality.” An Information Trust Association could establish voluntary standards for sharing user information and commerce across TCP-IP networks. This would open the door for an innovation revolution of entrepreneurial opportunity. Here are just three possibilities:

- One or more entities might emerge to handle the authentication, exchange, logging, sorting and settlement of access events across the web or mobile devices.
- Others might provide a foundation for consumers to barter the information they own – demographics, preferences, writing, observations – seamlessly across networks.
- Still others might be able to improve the security and portability of medical records.

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What needs to happen now?

Building this critical next piece of world information infrastructure requires two steps:

- Conveners must step forward to establish an Information Trust Association that is global in perspective. The Donald W. Reynolds Journalism Institute at the University of Missouri has laid some groundwork.
- Government and private users of the Internet and public mobile networks need to assess whether they can achieve more freedom, convenience and trust by supporting a collaborative, transparent, independent effort to create a free, open market for digital information.

A big idea – once before

It's easy to think of this as too big an idea -- one that will require significant technology and infrastructure. That's true. To be compelling, the system must have solid technology, a structure that enables the new-media service economy, and a motivating mission and culture. It must be ubiquitous, yet never be owned or controlled by either the government or a dominant private, for-profit entity. It should be massively distributed and — in some fashion — might ideally be collaboratively owned. It should ride on the existing web, and not interfere with it.

It's also to say: "I hope someone will do this." And wait. The time for waiting is over.

We have achieved this once. When the U.S. defense establishment developed the Internet, its goal was a massively distributed system that would withstand nuclear attack. Forty-some years later, it is the Internet's design that itself has exploded our information culture more thoroughly than any feared warhead might. But while the system has succeeded beyond anyone's imagination at opening up access to information, it has done little to enable the transfers of value to nurture and sustain that information. The Internet eliminates physical information product scarcity, becoming the perfect copy machine. As a result, the product-based models sustaining information creation crumble — first in music, now in newspapers, and possibly in books, magazines, video and music. What's needed is a ubiquitous social network that enables consumers to share value for information services.

The attention economy

So we are now in the *attention economy*. In the attention economy users seek an experience which values their time and attention, providing them access to the information they need . . . from anywhere . . . quickly and easily. Before the Internet, this was a role served pretty well by daily ink on print. Today the product embodiment of that idea -- the *newspaper* is failing to keep up to the task. We are moving toward a new paradigm, part aggregator, part content creator, part social network and we are searching for a name for the service -- for lack of a better term, I've called it the *information valet* and it has been the focus of my [research as a Donald W. Reynolds fellow](#) at the Missouri School of Journalism over the last year - - and earlier, with the founding in 1994 of what has become [Clickshare Service Corp.](#), which I'm part owner of, and which has a potentially [<http://tinyurl.com/2wtlpu> related patent.] My work at Missouri also lead to the creation of a company called [CircLabs Inc.](#)

“The defining challenge for news organizations in the 21st century is no longer managing proprietary information, but helping the public manage *our* attention to ubiquitous information.”

“To make the new, open market for digital information -- and attention -- we need to create a collaborative ownership and governance framework, assemble the required technology, and assessing the impact on law, regulation, competition, advertising and privacy.”

Collaborative ownership, governance

But there is a missing piece -- the need collaborative, transparent, non-profit ownership of needed clearinghouse for information transactions. To make the new, open market for digital information -- and attention -- the Information Trust Association must form a collaborative ownership and governance framework, assemble the required technology, and assess the impact on law, regulation, competition, advertising and privacy.

The mission of the Information Trust Exchange can be to help sustain, update and enrich the values and purposes of journalism through collaboration among news media, the public and public-focused institutions. Major technology, publishing, advertising, consumer and philanthropic organizations might underwrite ITE. It would then guide the creation of new standards and a platform for exchange of user authentication and transaction records. That would enable a competitive market for information, respecting and enabling consumer privacy and choice.

Like common-gauge railroad tracks, a stock exchange, interstate highways or our standard, 60-cycle continental electric grid, this platform should create a level – but competitive -- playing field – for the things sought by speakers yesterday (Dec. 1):

- The "gold-standard" measurement of user-access to web resources sought yesterday by Scripps newspaper executive (and 2010 Newspaper Association of America board chairman) Mark Contreras.
- The opportunity (but not the requirement) to charge for content sought by News Corp. Chairman Rupert Murdoch.
- The user-controlled, personalized advertising, which will allow Arianna Huffington's Huffington Post to thrive without charging.
- And the accountability to users for their privacy sought by the Center for Digital Democracy's Jeff Chester.

BUILDING BLOCKS FOR INFORMATION MARKETPLACE

The [Information Trust Exchange](#) can bring together [three vital threads](#) – trust, identity and commerce. Unless they are woven together, the Internet will fail to embody the best relationships of the physical world. They are inseparable building blocks of a free market for digital information.

Trust is the basic building block of human and business relationships. Without it, commerce is not possible because people/companies will face uncertainty. Trust can be direct (one-to-one) or proxied. Most of our trust relationships are proxied, and they are generally based upon historical knowledge. The basic Internet does not support trust because connections (relationships) can be "stateless" and ephemeral. There have been many "hacks" to overcome this (such as website Secure Certificates), but the core problem evolves from the fact that interactions are via a wire or wireless, not in person.

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Identity was left out of the Internet – perhaps wisely. When the TCP/IP protocol was developed, the network was designed to assign an IP number to a given machine on the network. In order to get on the network, you just had to be able to do so through a connected machine. And so that meant other users of the network were also just machine "nodes." You could know positively what machine you were connected to, but not WHOM you were connected to. This lack of an identify infrastructure is what allowed the Internet to get very big, and very useful, very quickly. You didn't need a license to join the "information superhighway." But organizations that need long-term, financial or trust relationships with real people (such as financial account holders . . . or subscribers) need to know who is on the other end of the wire. So the use of user names and passwords proliferated, at individual websites. The OpenID protocol provides for logins at multiple, largely unrelated websites. But it's not yet trustworthy for many purposes.

We think of commerce as involving money. But there are other forms of **information commerce**. You can trade on your reputation. You can barter your privacy. But unless trust and a method of assuring identity are present, you are at risk of having your money, your reputation or your privacy misappropriated without your knowledge or consent. So large-scale digital information commerce is difficult outside of a service or services that provide for trust and identity management.

Not the "sale of content"

I am among people who have been urging news organizations to think of themselves as service organizations, not manufacturers. Selling stories is like selling widgets, except that stories are perfectly replicable (copy and paste) at zero cost and physical widgets are not. So "protecting content" becomes a very, very hard problem. Better, I think, to conveniently provide trustworthy, newsworthy information wrapped within a service that can be differentiated. The service, thus, becomes the "widget" that is not easily copied.

One way to create the non-copyable service is to deliver it to a group of trusted, identifiable users. Because then when one of those users misappropriates the service -- or copies a story -- it becomes easier to sanction them in some fashion. Making an analogy to blog comments -- when you sign your name to a comment, you take ownership of it and you can be called out for what you write. Pseudonymous comments leave little basis for assigning trust, or accountability. First step -- the trust and identity network

So, the first step to enabling digital information commerce on the web is to create a [trust and identity network](#). Apple has done this in a proprietary way with the iTunes store. But it is opaque to the rest of us. Apple knows who I am when I buy a song, but they aren't sharing that trust relationship with anyone else (not that I'm sure I would want them to, in any case). Facebook conveys a certain degree of trust that you are who you say you are, based on experience (others look at your page, interact with you, could they all be dealing with an imposter?) But Facebook doesn't have your credit card, as Apple does, and so there is no possibility of financial trust there, yet.

“They’ll compete across geographic and topical spheres with search, advice, community, research, linking, hosting, data storage . . . to be best at meeting the consumer’s information needs within communities defined by individual users. Information resources won’t typically be owned by the valet . . . who is compensated for finding, shaping and referring, much as a retailer?”

The flaw in the Apple model is that it is only Apple. What's needed is a trust and identity network that is open to a plurality of trust providers -- so that a consumer user has broad choice of terms and conditions for managing trust, identity and commerce. This will ensure a free market for digital information.

ONE ALTERNATIVE: MULTIPLE INFORMATION VALETS (OR AGENTS)

A service network of information agents – or “infovalets” may replace the old physical product-oriented music, publishing and entertainment industries, replacing many CDs, newspapers, DVDs, perhaps even books.

These valets – or agents – will answer to individual consumers. They’ll compete across geographic and topical spheres with search, advice, community, research, linking, hosting, data storage and other services. They will compete to be best at meeting the consumer’s diverse information needs within communities defined by individual users. The valet will not typically own information resources. Rather, the valet will be compensated for finding, shaping and referring them to the consumer, much as a retailer aggregates and merchandises for wholesalers.

The information valet will be a service organization — like a law or accounting firm — and it will be paid accordingly. At first, it will be extremely difficult to convince people to pay for such a service. But as the years go by, it will be seen as an absolutely indispensable way to get through the day. People will become as reliant on their infovalet -- their "Newshare" -- as on their car, doctor, parent or colleague. Larger cities will have multiple "new shares" -- offering competing information-valet services.

They will compete largely on technical grounds — which sorts best, who finds the real gems, and who provides premium information at the right price bundle. Advertising will be part of all this, but it will be an option — if you are willing to receive advertising, the cost of your "Newshare" will be less.

Privacy as a service

But the competition for mass-audience advertising on the web is such that it seems hard to imagine sustainable rates will ever support the amount of original reporting the United States has enjoyed for the last 50 years. Audiences are now atomizing and the only future for advertising is in presenting targeted messages to individual users. This means the entity that earns the right to receive value for advertising is going to be the one that does the best job of understanding and then servicing

Renumeration, reputation, validation

Excerpted from: [“Sustaining democracy / sustaining journalism: A discussion at MIT, June 17, 2007”](#)

The identity system has to be open, light, accessible and it has to be tied in with a robust reputation system. You can’t talk about renumeration without talking about reputation and validation of the source and perhaps also of the user. And particularly where users are now creators as well as mere users.

So a challenge is to build communities which will sustain community journalism. What would be the tools and conditions that would do that? Might they include a payment system? But is that sufficient, or just necessary? What else is needed from a social-networking point of view, not just a technical point of view? A consensus starts to emerge about the enumerated problems:

1. Finding a way to enumerate, exchange value
2. A valid way to measure reputation and therefore have accountability
3. A mechanism for sharing content which involves effective distribution and aggregation --sustainability
4. How to find users and information
5. A mechanism for user identity.

the needs of an individual user — including privacy. In the information-service economy, you information valet will be paid for arranging your attention when you look at an ad, and that payment will be a credit to an account, will offset your purchase of premium information. This represents an ebb and flow of attention and info-currency, depending upon whether it is information someone wants you to have or information you want.

Summing up:

- Journalism is expensive, and mass-market web advertising alone will not sustain it.
- Single-site charging for content puts up walls that destroy the brilliant utility of the open web.
- Sustaining journalism requires rethinking mass-market advertising, and news as a product rather than service.
- Convene an Information Trust Association could establish voluntary protocols for a free market for digital information.

The news industry may participate in a new information trust economy by:

- Migrating from its historic role as the most-trusted consumer information source in print to a ubiquitous advisor, authenticator and retailer of news, entertainment and service information from anywhere.
- Aggregating for advertisers opt-in audience measurement and selected demographic data by unique, authorizing users whose identity can then persists across a federated network that also tracks, aggregates, sorts and shares revenues.
- Putting in place technology for the optional sharing of content by subscription or click with sophisticated, dynamic pricing and bundling options that eliminate walls.

One scenario

The initial form could be a [news-based social network](#), strongly relevant content, absolute control for users over their demographic and financial data, and a means to share, sell and buy content from multiple sources with a single account. The network will support news content creators by delivering high-value commercial content to end users; and will enable a two-way flow of payments or reward points in consumer accounts. While revenues and advertising will be shared, each owner-user of the collaborative will retain complete control of its existing customer (reader/advertiser) base, including name and account information. Demographics will be shared only based upon the opt-in permissions set by consumers and the joint business rules of the collaborative owners.

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