DONALD W. REYNOLDS JOURNALISM INSTITUTE
Missouri School of Journalism University of Missouri

THE INFORMATION TRUST EXCHANGE
Trust, identity, personalization, content and user sharing for the news industry

October 28, 2015

To participants in the Information Trust Exchange (ITE) project:

To those of you who joined the Reynolds Journalism Institute (RJI) at one of four ITE task-group roundtables over the last five weeks – thank-you! We are thoroughly encouraged by the richness of ideas each of you brings, and the spirit of determined collaboration we shared.

This is our first report to you on progress and next steps.

We met in Columbia, Cambridge, Portland and New York from Sept. 15-Oct. 8. Our work was prefaced by:

- An invitation linked to a proposal
- A case statement
- A questionnaire
- Proposed service features and design specifications
- The RJI report: "From Persona to Payment."

In each city, we experienced a remarkable mix of commitment and passion – a willingness to think beyond our own ideas toward a collaboration in service of journalism and democracy. Task group members represent technology, advertising, legacy publishing, independent media, researchers, marketers and academics. Soon, we hope to add voices from the general public.

In this note, we'd like to:

- Suggest our mission and put it in context
- Describe the core challenges
- Document some of what we've learned in the last five weeks
- Ask: How can you help now?
- Propose for discussion the next steps in 90 days, 120 days, six months

MISSION – AND THE HUNT FOR BETTER RELATIONSHIPS

In our publisher invitation to begin the task-group process, we wrote:

> *The goal of the ITE is to help publishers [and creative artists] to deepen services and relationships with subscribers, users [and patrons], to lessen dependence on "tech platforms" and make more money sharing content – both editorial and sponsored. The ITE will be governed by a non-profit consortium and operated by for-profit enterprises in the areas of single-sign-on authentication [or authorization], identity, privacy, subscriptions, payments, personalization and rights/access management.*

Some of you may remember an opening scene from "*The Hunt for Red October*," a 1990 movie about a turning point, a change in the relationship between great powers. As his submarine slipped forbodingly seaward a under a slate-grey sky 500 miles north of Murmansk , actor Sean Connery, played a Russian skipper, Marko Ramius, who, secretly, is about to upset the power balance.

We learn – much later – Ramius is deeply troubled by the futility of a nuclear technology stalemate and hazardous war games among two great powers. As his submarine prepares to dive at the start of a thriller voyage invented by novelist Tom Clancy, a junior officer says to Ramius: "It's time, Captain." In his soft-spoken and reflective answer – "We go," Connery rises to the challenge of that time. Three years after the film's debut, the Soviet Union had yielded to the Russian Federation and the Cold War was over at least for a generation.

We are in the midst of a technological cold war – a senseless escalation of tension among those who would instruct absolute privacy and those who find the very word a quaintly modern phenomenon we should all "get over." Meanwhile, dodos worthy of Alice's Adventures in Wonderland try haphazardly to acquire more "eyeballs" and more user data in a spinning race of uncertain purpose.

Forty of you have committed time and brain cycles to wondering if it is time to change the game . . . the race . . . and the relationships on the web and mobile that now broker our trust, identity, privacy and information commerce. Can we create an open market for information where we all have more choice and control over our personal privacy, at the same time we enjoy – and easily reward – unique, personalized experience and constructive community relationships?

Let's consider that an achievable mission.

THE CORE CHALLENGES

For at least seven years, ITE collaborators John Taysom, Drummond Reed and experts in the news industry have recognized a looming challenge – how to curb growing reliance on unauthorized sharing of personal data in order to support journalism via digital advertising.

"We are hemorrhaging personal information, others are profiting from it, and we are getting substandard product," veteran new-media executive and consultant Elizabeth Osder said during the 2008 Reynolds Journalism Institute gathering, "Blueprinting the Information Valet Economy." She added: "Citizens need to eventually take control of that information because that is about their privacy. Maybe there is a role for media companies to help facilitate that community gold . . . I want all of those places where I sign up for to be managed on my desktop in the way that I can control and look at them rather then me going off and finding stuff."

Other ITE collaborators such as Dave Gehring, Henry "Buzz" Wurzer and Peter Winter are clear about the desperate measures newspapers – in particular -- must undertake, and the necessity for a single voice. For publishers to remain at the center of solving the problems the experts identify, they face these challenges:

- Because of the way third-party cookies work to manage user identity, publishers must today – for the sake of advertising revenue -- allow their subscriber and reader data to leak from their web services to anonymous marketers all over the web. This erodes trust.

- Facebook, Google, Apple and other "platforms" know more about news readers than do publishers, threatening the ability of publishers to make money providing services.

- Today, there is no convenient way to pay multiple publishers for personalized content or services virtually assembled from many sources – sort of a transparent clearinghouse and marketplace for content and users.

WHAT WE'VE LEARNED

At each of our four meetings, we've created some blueprints for action:

- At the Sept. 16 meeting hosted at the Reynolds Journalism Institute, we decided that one or more proof-of-concept demonstrations of services addressing the ITE mission. We hammered out objectives for such prototyping – designed to appeal to the public and create measurable information helping publishers to grow audiences, increase revenues and deepen user relationships.

- Eight of us met in a seminar room at Harvard Law School on Sept. 23 to talk about authentication and identity. Host Scott Bradner, an Internet standards-process guru, navigated us through a set of preliminary recommendations about the prototyping process, including 11 design requirements for a proof-of-concept demonstration followed by at least one pilot. We asked three "burning" questions for trials to answer. We listed value propositions for content providers, tech platforms and the public.

- It was not until Portland, Ore., where we were hosted by the Turnbull Center, that our largest task group started to dig into the specifics of how an ITE service might describe, tag, share and sell information. There was consensus on a set of features, and detailed discussion about how data would be exchanged – but no consensus on how to demonstrate payments.

- Our final task-group meeting in New York was deeply affected by an atmosphere of business crisis in publishing resulting from the rise of "ad blocking" software, which played perfectly into the group's focus on privacy and the sharing of user data. Ad blocking came up at the pre-meeting dinner, and figured in our agenda for Oct. 8 in a cozy conference room arranged by Sean Bohan of Mozilla Inc. (Read the MEETING SUMMARY).

The work of these four task groups together provides living context to a living document: "Service Features and Design Specifications" for the ITE. This document defines what the ITE should govern, and proposes a three-element core structure for doing so as (1) a governing authority, (2) a set of technical protocols and business rules and (3) a method for securely transferring information among and between ITE members.

HOW CAN YOU HELP?

Below are seven ways we hope you and fellow task-group participants can help move the ITE project along. Please email me (Bill Densmore / densmorew@rjionline.org) to let me know which you can step up to -- or another idea you have for furthering the ITE initiative.

1. Bookmark a link to the ITE Google Group to follow updates and post suggestions, links or resources. Here's the link:
   https://groups.google.com/d/forum/information-trust-exchange-project

   Within a few days, we'll send you an invitation to join the group, should you wish to receive email updates. But you can read and post to the group without "joining it" – we'll moderate posts. Use this email address to post: information-trust-exchange-program@googlegroups.com

2. Volunteer your organization to participate in prototyping of an ITE service through the authorized use of your content, and/or an invitation to some of your subscribers/users to be part of testing.

3. Review and comment on the three-page Appendix to this note: "Operational Requirements of ITE-sanctioned services."

4. Help create a fresh http://www.infotrust.org website that distills and simplifies the ITE project to essential information readily understood by first-time visitors within and outside the news industry.

5. Help develop a budget and identify appropriate founding members and funders for the ITE initiative.

6. Assist with drafting and editing (or adopting and adjusting from appropriate sources) initial rules for ITE services. Right now these are the documents we'll be working on because they are needed by folks developing proof-of-concept demonstrations:

    a. taxonomy for shareable user attributes
    b. taxonomy for identifying, categorizing and tagging content
    c. taxonomy for categorizing and and routing advertising

7. Participate in one or more online design charettes to diagram the processing and flow of content data, user interest, logging and payment metadata in a reference implementation of an ITE-sanctioned service.

WHAT ARE THE NEXT STEPS?

The five meetings – at O'Hare in May and during the last five weeks in four other cities – help bring into focus the hunger for -- and opportunity to collaboratively engineer -- a deliberate approach to the future of trust, identity, privacy and information commerce across the Internet. The Reynolds Journalism Institute is gearing up for a set of likely next steps. There is no roadmap, so RJI invites your participation and input to help us consider the order, priority – and efficacy -- of the steps noted below.

First, three caveats:

- The step of forming a governing organization is not listed, pending discussions as to timing with initial members, funders and collaborators.

- Testing and network rules as they are established must also allow participating affiliates or publishers to continue to operate within their silo. The ITE protocols should be additive to these businesses.

- At least initially, the rules must permit publishers to insert their own cookies or do other things to identify users, unless or until the Information Trust Exchange prohibits such behavior as a condition of membership -- and because a viable alternative is in place.

Below, we have attempted to order these steps chronologically.

WITHIN 90 DAYS: Testing / Membership / Funding

1. Sanction and support (with funding if possible) the rapid deployment of a Proof-of-Concept demonstration of one service operating within an ITE ecosystem as pictured by the four task groups. The demo should be deployed in a matter of weeks, not months, so that it can be tested by a panel of up to 10,000 Public Insight Network members

nationwide. Key elements of demo(s) would include some, but not necessarily all, of these:

a. User is supplied a personalized stream of news from thousands of sources.
b. The service is branded by one of at least three participating news organization "presenters."
c. The demo is able to log and analyze user activity and at least simulate content sharing and sale.
d. The activity logging function provides a demonstration of the sharing of content among otherwise independent publishers and their users.
e. Test open technical protocols for metadata exchange among members for user identity, content sharing/sale and user-opted-in advertising personalization.

2. Recruit founding publisher, foundation, individual and platform members

a. Define levels of support
b. Review potential for program-related-investments or R&D support in the form of non-equity loans
c. Confirm need for new, independent organization
d. Canvas preferences for corporate form (association, co-operative, hybrid nonprofit owning for-profit)
e. Identify possible founding board membership/leadership

3. Document the operational requirements of exchange services beyond trials

WITHIN 120 DAYS: Member agreements/obligations

4. Begin drafting and circulation of an Information Trust Exchange Member Agreement. Address rules for:

a. Authorization of users to ITE-compliant services
b. Definition and use of Personally Identifiable Information.
c. Respecting and facilitating user privacy
d. Tagging and presenting content
e. Exchanging (not controlling or influencing) pricing
f. Classes of rights/responsibilities for ITE members
g. Services required to be maintained by publishers – such as content access control.

5. Draft a proposed governing structure for the ITE – a non-stock, public-benefit, member organization that will:

a. License affiliate members to provide services for the operation of the Exchange
b. Create and maintain the rules, protocols and standards by which members and contract vendors of the Exchange operate.

WITHIN SIX MONTHS:

6. Solicit and align with potential network service providers. Services required:

a. Publisher content access control

b. User identity data management
c. Network user authorization services
d. Event / access logging service
e. Log billing and settlement service
f. End-user content personalization services

7. Write protocols and standards that govern the operation of the Exchange. These protocols include rules for:

    a. Establishing user identity
    b. Sharing user authentication
    c. Profile sharing
    d. Copyright/syndication payment exchange and settlement
    e. End-user billing and charging
    f. Transfer of specific information across the public TCP/IP network (Internet) among and between (a) diverse point-of-service (POS) devices, such as laptops, smartphones and tablets and (b) Exchange members, including content providers (CP) and end-user service providers (USP).
    g. Use, ownership and custodianship of personally-identifiable information (PII)
    h. Framework for valuing exchange of personally identifiable information.
    i. Control by users over a digital identity with respect to accessing, sharing and purchasing news and information content, and other users.
    j. Establish an enforcement and disciplinary process to ensure members and affiliates operate within the rules.
    k. The responsibilities of members and vendors to the operation of the ITE

A BIG PROJECT IN PIECES

This is a big project, people often say. But it is doable, if we approach it as a series of smaller projects -- coordinated to enable a larger outcome. Think about the pieces that interest you, or are vital to your business, or vital to journalism and democracy. Let RJI know the role you'd like to play. We'll be trying to document and guide the pieces underway, to anticipate what's needed next, to enlist the help of others, and to understand and help obtain the resources required.

Again, thank-you for your time, and vision.

APPENDIX

Operational Requirements of ITE-sanctioned services

DRAFT / FOR DISCUSSION
(October 25, 2015 v1.0)

The following are PROPOSED requirements of a special-purpose Exchange that securely transfers information among and between Exchange members, including content providers, end-user service providers, network operators and network service providers. The Exchange would operate through contracts between commercial vendors and the ITE Governing Authority.

Find or create tools/services that do the following:

1. ADVERTISERS -- Enable an advertiser to precisely reach relevant consumers with a personal message, and reward the user's service provider – and even the user directly – for the privilege of delivering the message.

    - Create online advertising exchanges to work in milliseconds with demand-side and sell-side platforms to match willing advertisers with willing publishers and aggregators to deliver “impressions” to interested consumers. Prices range dramatically, as do the content and form of the advertisements.

    - Enable the delivery of precisely-targeted advertising and other commercial content relevant to a reader’s expressly shared demographic profile, social networking connections, ad content preferences and browsing history.

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2. CONTENT ACCESS -- Give publishers assurance that the person is authorized to view the resource requested and that, if money is involved, the money is going to be handled and publishers will get or give what the person expects.

3. CONTENT PACKAGING – Facilitate custom assembly by the end user of information services from a variety of topical and geographic-oriented sources into personalized subscription packages.

4. CONTENT REPOSITORY -- Sanction one or more external or outsourced “cloud” services for storing and indexing news content uploaded by publishing members who prefer not to host their own content.

5. DYNAMIC SERVICING – Give publishers who offer their content real-time personal, demographic, preference or interest attributes of a user/reader at the time the user makes an online/mobile request for information, so the publisher can respond with targeted, customized messages or services.

6. FREEMIUM vs. FREE -- Allow the public user to chose among a range of options from (1) no advertising and no disclosure or use of their tracked activity in a subscription-based approach to (2) receipt of highly customized commercial messages and the wide, background marketing of their information preferences in a rewards-based program approach.

7. LOGGING ACTIVITY -- Every click across the Exchange that involves an exchange of value (a payment for an article or a reward for viewing or doing something) is logged to an authentication and logging service, which is seen by the system participants as a "central shared service" although in Exchange practice it may be distributed and hierarchal as with DNS.

8. LOGGING REPORTS -- At settlement time, the settlement service bundles all the clicks -- sorted by home-base of the users on the one hand and by the vending publisher on the other hand -- and determines an aggregate debit or credit to charge the home base and an aggregated credit or debit to charge the publishers (note that a "publisher" could be a brand which is paying for a user to view a commercial message). This all is done periodically -- daily, weekly, monthly -- probably weekly in prototype -- across the bank ACH Exchange with log reports sent to the home bases and publishers.

9. MICROACCOUNTING -- Create a clearing-house settlement process for payments and credits among publishers and user-account managers.

10. EXCHANGE SUBSCRIPTIONS – Enable publishers to be paid for providing digital content across an ITE Exchange without having to have one-off relationship with each reader/user.

11. ONE BILL/ACCOUNT – Create one account, one ID and one bill with which to acquire a wide variety of content from multiple, otherwise independent sources by subscription or by click/action.

12. PRICING -- Enable a content provider to establish and vary pricing for discrete information objects in real time based on the user's identity, relationships and use.

13. Enable a service provider to make money by purchasing content at lower wholesale prices and reselling it at higher retailer prices to its users, managing the spread as a business exercise.

14. PRIVACY – Create mechanisms for aggregating and sharing demographic, interest and preference data about individual users upon transparent terms acceptable to the individual.

    - Allow ITE service providers who establish accounts and manage the persona and privacy of their users will be willing to share some demographic and interest information about their users to third-party publishers as a condition of those publishers being willing to provide services to those users.

    - Create the opportunity for an entity or entities that would help consumers manage their personas across a variety of information services – some paid and some that pay, or reward (e.g. rewards programs).

15. REMOTE USER SERVICE – Enable publishers to sell information resources to anonymized incoming casual or "drive-by" users (a la "newsstand customers") at a reasonable price they establish, without knowing the identity or detailed information about these "guest" users.

16. SANCTIONS -- Create sanctions and sanctions process for violation of the rules/protocols of the ITE by its member/clients. Those applying the sanctions must have no competitive business interest in the process/outcome -- thus the need for a non-governmental and non-investor-owned entity with a mission to efficiently oversee and operate a service and not profit from it. Profit is for the publishers and service providers who use the service.

17. SEARCH -- Support a real-time query and reply to confirm desire of the end user to acquire the resource based upon its cost, value or other attributes including their preference information when making an information request.

    - Enable multiple ways to create personalization of content preferences including a mixing and matching between inferred and expressed referencing.

    - Create a means to deliver contextually-relevant content recommendations to Exchange members.

    - Provide easy, low-cost, copyright-respecting access to "Deep Web" and other content stored behind pay, registration, membership and once-proprietary barriers.

18. SECURITY -- Information about end-user identities are known only to the end-user's service provider (USP). The Exchange system only knows users by a standardized unique alphaneumeric identifier. Financial information and content access are protected by impenetrable security measures accompanied by extra strong encryption, thus protecting them from external disclosure as well as internal disclosure.

19. SUBSCRIPTIONS -- Enable a plurality of subscription packages with pricing as in a free market for digital information -- set by the service provider who holds the end-user's account, and also set by the publisher who wants pricing control over their content.

20. UNIVERSAL TRACKING – Enable a user's activity to be tracked across the ITE Exchange and that activity aggregated – only -- to the user's home-base service provider for billing and analysis – contingent upon explicit permission of the user. The logging service knows the user only by a unique alphanumeric identifier supplied by the user's "home base" at the start of that particular session. As a matter of policy, the logging service shall not sell or provide clickstream data to ANYONE and provides it only to the user's home service provider for their purposes (and for audit purposes to the publishing content provider if requested). The identifier -- to anyone other than the home base itself -- reveals nothing more than the identity of the user's home base.