

Social Media and Privacy: The Technical Requirements, and the Role of Law

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<http://www.rogerclarke.com/II/COSML-1401> { .html, .pdf }

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Social Media and Privacy Agenda

1. Social Media
2. Trust
3. Opportunities for Consumer-Oriented Social Media (COSM)
 - Architecture
 - Openness
 - Privacy Features
4. The Role of Law

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Social Media A Business-Oriented Classification

		Social presence/ Media richness		
		Low	Medium	High
Self-presentation/ Self-disclosure	High	Blogs	Social networking sites (e.g., Facebook)	Virtual social worlds (e.g., Second Life)
	Low	Collaborative projects (e.g., Wikipedia)	Content communities (e.g., YouTube)	Virtual game worlds (e.g., World of Warcraft)

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Kaplan & Haenlein (2010)

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A Participant-Oriented Classification of Social Media

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A Participant-Oriented Classification of Social Media

Interaction (Closed)	1 ↔ 1 OR 1 ↔ few	
Broadcast (Open)	1 → many	
Collaboration or Sharing (Semi-Open or Open)	1 ↔ many	Content
		Indicator
		Gaming

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<http://www.rogerclarke.com/II/COSM-1301.html#SM>

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Email / Chat-IM / Skype
Messaging

Web-Pages
'Walled-garden' 'wall-postings'
YouTube

Wikis

Dis/Approval
'Like', '+1'

Second Life

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Email / Chat-IM / Skype
Messaging ... **Twitter?**

Web-Pages
'Walled-garden' 'wall-postings'
YouTube, ... **Twitter**

Wikis, ... **Twitter?**

Dis/Approval
'Like', '+1', ... **Twitter?**

Second Life

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<http://www.rogerclarke.com/II/COSM-1301.html#SM>

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Currently-Available Social Media Genres

1-with-1/Few INTERACTION Tools

- networked text **email** (asynchronous)
- networked text **chat / IM** (synchronous)
- SMS / texting** from mobile phones
- email-attachments**, any format (asynch)
- voice**:

- over Internet (VoIP, **Skype**) (synch)
- tele-conferencing (VoIP, Skype) (synch)
- videophone (Skype Video) (synch)
- video-conferencing (Skype Video) (synch)

1-to-Many BROADCAST Tools

- bulletin boards systems (**BBS**)
- Usenet / **netnews**
- email lists**
- web-pages**
- indexes** (Lycos, Altavista, Google, Bing)
- blogs** (WordPress, Blogspot)
- micro-blogs** (**Twitter**, Tumblr)
- glogs** – wearable wireless webcams, cyborg-logs, retro-nymed as 'graphical blogs'

- 'content communities'**, e.g. for images (deviantArt, Flickr and Picasa), for videos (**YouTube**), for slide-sets (Slideshare)
- closed / 'walled-garden' 'wall-postings'** within SNS (Plaxo, MySpace, LinkedIn, Xing, Reddit, Facebook, Google+)

1-with-Many SHARING Tools

- Content Collaboration**
 - wikis** (Wikipedia)
 - social news sites** (Slashdot, Newsvine)
 - online office apps** (Zoho, Google Docs, MS Live)
- Indicator-Sharing**
 - 'social bookmarking'** (Delicious)
 - dis/approvals** (Digg's dig & bury, Reddit's up & down, StumbleUpon's thumbs-up & thumbs-down, Facebook's **Like** button, Google+'s **+1** button)
- Multi-Player Networked Gaming**
 - text-based **MUDDS**
 - social gaming** sites (Friendster)
 - Massively Multiplayer Online Games (**MMOGs**), esp. Role-Playing Games (MMORPGs), e.g. World of Warcraft
 - online virtual worlds** (Second Life)

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Version of Feb 2013. Add in Instagram, Pinterest, ...

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Social Media A Working Definition

And hence Scope Specification

An application or service that is perceived by its users to support them in relation to:

- Interaction with other people
- Broadcast to other people
- Sharing with other people

Social Media's Business Model

- 'There must be a way to monetise this somehow'
- 'You will find something interesting here' is a self-fulfilling prophecy, because people can be enticed to contribute 'something interesting'
- Contributors, and the people who come after them, can be enticed to click on targeted **advertisements**
- **Targeting** is based on:
 - profile-data that users supply about themselves
 - content that they have donated
 - their online behaviour while using the service
 - their online behaviour more generally
 - data that other people contribute about the user

2. Trust

Confident Reliance by a party on the behaviour of other parties which results in willingness to expose oneself to risks

Origins

Familial and Social Settings in which Cultural Affinity exists

DisTrust

Confident Reliance by a party on the MISbehaviour of other parties
OR

Active Belief by a party that the behaviour of other parties is not reliable, or is actively harmful to the first party's interests

Lack of Trust

The absence, or inadequacy, of confidence by a party in the reliability of the behaviour of other parties

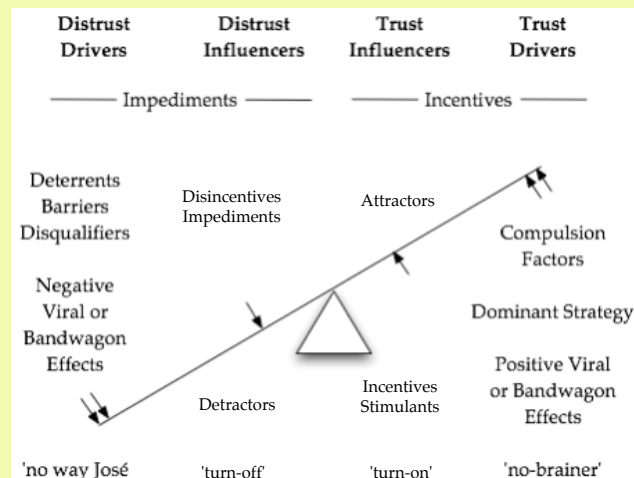
Forced Trust

Hope held by a party that the behaviour of other parties will be reliable or not harmful, despite the absence or inadequacy of important trust factors

Categories of Trust Factor

- **Trust Influencer**
Positive influence on the likelihood a party will participate
- **Distrust Influencer**
Negative influence on the likelihood a party will participate
- **Trust Driver**
Such a strong positive influence on the likelihood of a party participating that it determines the outcome
- **Distrust Driver**
Such a strong negative influence on the likelihood of a party participating that it determines the outcome

Categories of Trust Factor



Social Media and Privacy

Agenda

1. Social Media
2. Trust
3. Opportunities for Consumer-Oriented Social Media (COSM)
 - Architecture
 - Openness
 - Privacy Features
4. The Role of Law

Consumer-Oriented Social Media (COSM) Architecture

- **Client-Server**
Centralised storage and control by the service-provider
- ... with Replication
Multiple copies, but centralised control
- ... with Distribution
Scattered storage, but centralised control

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All content and control on participants' own devices
e.g. <http://tent.io/>

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- **Peer-to-Peer (P2P)**
All content and control on participants' own devices
e.g. <http://tent.io/>
- **Semi-Peer-to-Peer (P2P)**
Content and control scattered across many participant-controlled devices
e.g. <http://jappix.org/why>

Consumer-Oriented Social Media (COSM) Openness

- **Interoperability**
 - Content Openness
(not a 'walled garden' / 'island')
 - Message Openness
(to/from any email, chat/IM)
- **Portability**
 - Content Export-Import
(profile, postings, messages)

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 - **Portability**
 - Content Export-Import
(profile, postings, messages)
- A Google Feature**
An EU Generation 3 Requirement?

Consumer-Oriented Social Media (COSM) Privacy Features

- The interest that individuals have in sustaining a 'personal space', free from interference by other people and organisations
- Multiple Dimensions
 - Privacy of Personal Data / Data Protection
 - Privacy of Personal Communications
 - Privacy of the Person
 - Privacy of Personal Behaviour
 - Privacy of Personal Experience

"[A social networking service] profits primarily by using heretofore private information it has collected about you to target advertising. And Zuckerberg has repeatedly made sudden, sometimes ill conceived and often poorly communicated policy changes that resulted in once-private personal information becoming instantly and publicly accessible. As a result, **once-latent concerns over privacy, power and profit have bubbled up and led both domestic and international regulatory agencies to scrutinize the company more closely** ... The high-handed manner in which members' personal information has been treated, the lack of consultation or even communication with them beforehand, Facebook's growing domination of the entire social networking sphere, Zuckerberg's constant and very public declarations of the death of privacy and his seeming imposition of new social norms all feed **growing fears that [Zuckerberg] and Facebook itself simply can not be trusted**"

A Catalogue of Social Media Privacy Concerns

- 1 Privacy-Abusive **Data Collection**
- 2 Privacy-Abusive **Service-Provider Rights**
- 3 Privacy-Abusive **Functionality and User Interfaces**
- 4 Privacy-Abusive **Data Exploitation**

Source: Reviews of Media Reports 2005-11

A Catalogue of Social Media Privacy Concerns

1 Privacy-Abusive Data Collection

Demands for User Data

- Identity data
- Profile data
- Contacts data, including users' address-books:
 - Their contact-points (some sensitive)
 - Comments about them (ditto)
- By implication, their social networks

Collection of User Data

- About users' online behaviour when transacting with and via the particular service, over time
- About users' online behaviour, even when not transacting with or via the particular service
- From third parties, without notice to the user and/or without user consent
- About users' locations over time

2 Privacy-Abusive Service-Provider Rights

Terms of Service Features

- Substantial self-declared, non-negotiable rights for the service-provider, including:
 - To exploit users' data for their own purposes
 - To disclose users' data to other organisations
 - To retain users' data permanently, even if the person terminates their account
 - To change Terms of Service:
 - unilaterally
 - without advance notice to users; and/or
 - without any notice to users

Exercise of Self-Declared Service-Provider Rights

- In ways harmful to users' interests
- In order to renege on previous undertakings

Avoidance of Consumer Protection and Privacy Laws

- Location of storage and processing in data havens
- Location of contract-jurisdiction distant from users
- Ignoring of regulatory and oversight agencies
- Acceptance of nuisance-value fines and nominal undertakings

A Catalogue of Social Media Privacy Concerns

3 Privacy-Abusive Functionality and User Interfaces

Privacy-Related Settings

- Non-conservative default settings
- Inadequate granularity
- Failure to group into Profiles
- Complex and unhelpful user interfaces
- Changes to the effects of settings, without advance notice, without any notice and/or without consent

'Real Names' Policies

- Denial of multiple identities
- Denial of anonymity
- Denial of pseudonymity
- Enforced publication of 'real name', associated profile data

Functionality and User Interface

- Inadequate documentation and reliance on interpolation
- Frequent changes; and/or without advance notice to users, without any notice to users and/or without user consent

User Access to Their Data

- Lack of clarity about whether, and how, data can be accessed
- Lack of, even denial of, the right of subject access

User Deletion of Their Data

- Lack of clarity about whether, and how, data can be deleted
- Lack of, and even denial of, the user's right to delete

4 Privacy-Abusive Data Exploitation

Exposure of User Data to Third Parties

- Wide exposure, in violation of previous Terms, of:
 - Users' profile-data (e.g. address, mobile-phone)
 - Users' postings
 - Users' advertising and purchasing behaviour
 - Users' explicit social networks
 - Users' inferred social networks, e.g. from messaging-traffic
- Changes to the scope of exposure:
 - Without advance notice to users
 - Without any notice to users; and/or
 - Without user consent
- Access by government agencies without demonstrated legal authority

Exposure of Data about Other People

- Upload of users' address-books, including:
 - Their contact-points
 - Comments about them
 - By implication, their social networks
- Exploitation of non-users' interactions with users
- Disclosure of non-users' social networks

A Catalogue of Social Media Privacy Concerns

1 Privacy-Abusive Data Collection

- Demands for User Data
- Collection of User Data

2 Privacy-Abusive Service-Provider Rights

- Terms of Service Features
- Exercise of Self-Declared Service-Provider Rights
- Avoidance of Consumer Protection and Privacy Laws

3 Privacy-Abusive Functionality, User Interfaces

- Privacy-Related Settings
- 'Real Names' Policies
- Functionality and User Interface
- User Access to Their Data
- User Deletion of Their Data

4 Privacy-Abusive Data Exploitation

- Exposure of User Data to Third Parties
- Exposure of Data about Other People

A Catalogue of Social Media Privacy Concerns

1 Privacy-Abusive Data Collection

- Demands for User Data
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2 Privacy-Abusive Service-Provider Rights

- **Terms of Service Features**
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- Avoidance of Consumer Protection and Privacy Laws

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- **Privacy-Related Settings**
- **'Real Names' Policies**
- Functionality and User Interface
- User Access to Their Data
- User Deletion of Their Data

4 Privacy-Abusive Data Exploitation

- Exposure of User Data to Third Parties
- **Exposure of Data about Other People**

Instances of Social Media Privacy Concerns

2 Privacy-Abusive Service-Provider Rights

Terms of Service Features

- Substantial self-declared, non-negotiable rights for the service-provider, including:
 - To exploit users' data for their own purposes
 - To disclose users' data to other organisations
 - To retain users' data permanently, even if the person terminates their account
 - To change Terms of Service:
 - unilaterally
 - without advance notice to users; and/or
 - without any notice to users

i.e. The Absence of Consent

Instances of Social Media Privacy Concerns

3 Privacy-Abusive Functionality

Privacy-Related Settings

- Non-conservative default settings
- Inadequate granularity
- Failure to group into Profiles
- Complex and unhelpful user interfaces
- Changes to the effects of settings, without advance notice, without any notice and/or without consent

i.e. A Distrust Influencer, even Driver

Instances of Social Media Privacy Concerns

3 Privacy-Abusive Functionality

'Real Names' Policies

- Denial of multiple identities
- Denial of anonymity
- Denial of pseudonymity
- Enforced publication of 'real name' and associated profile data

i.e. Threatening to Persons-at-Risk

Instances of Social Media Privacy Concerns

4 Privacy-Abusive Data Exploitation

Exposure of Data about Other People

- Upload of users' address-books, including:
 - other people's contact-points
 - comments about other people
 - by implication, their social networks
- Comments about other people
- Exploitation of non-users' interactions with users
- Disclosure of non-users' social networks

i.e. Extends to 'Innocent Victims'

Location – from Added-Extra to Intrinsic

- Physical Address / **Geo-Location**
 - knowledge of the cell that a mobile-phone is in, is intrinsic to the service's operation
 - more precise geo-location is increasingly feasible
 - location is becoming readily available to the device
 - location is being acquired by service-providers
- Location-based services can be valuable to users
- A primary use is in consumer marketing
- For most current-round SMS, location is an extra
- For the coming round, Geo-Location is intrinsic**
- Privacy sensitivity about Social Media will leap**

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<http://www.rogerclarke.com/DV/YAWYB-CWP.html> (2011)
<http://www.rogerclarke.com/DV/LTMD.html> (2013)

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The Primary Geolocation Technologies

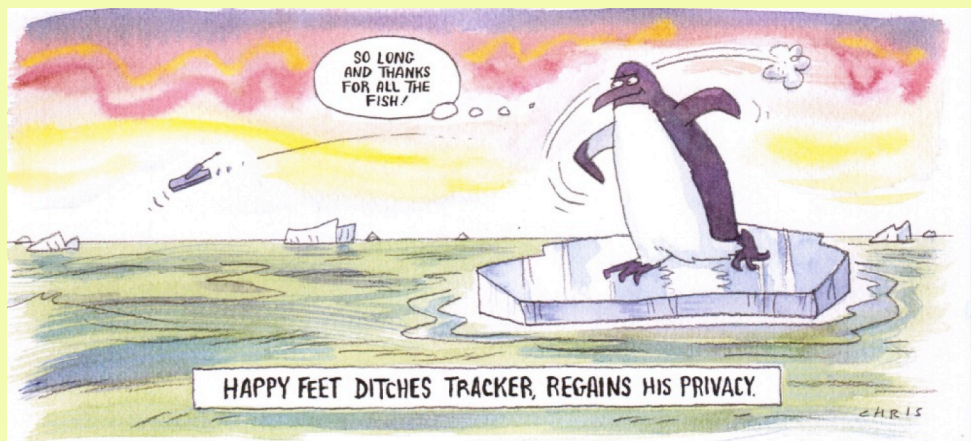
Technology	Acquirer	Process	Data Quality
Cell Location	Base-Station	Device registers with the base-station 10 times per second	50-100m or several hundred metres
Directional Analysis	Base-Station	Receivers have a known arc and range	Sector within Cell, with errors
Triangulation	Base-Station	Multiple base-stations per Cell enable location within the intersection of their Sectors	Multilateral space within Cell (e.g. a triangle), with errors
Signal Analysis	Base-Station	TDOA (Time Difference of Arrival, aka multi-lateration) RSSI (Received Signal Strength Indicator) AOA (Angle of Arrival)	Small space within Cell, with errors
Proximity to a particular Wifi Router	Any Message Recipient	Commercial services gather and maintain databases of recorded location of Wifi Routers	10m claimed 50-100m measured with errors
GPS	The Device	Device detects satellite signals, Device self-reports its coordinates	7-8m claimed 20-100m measured availability and speed issues, with errors

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<http://www.rogerclarke.com/DV/LTMD.html>

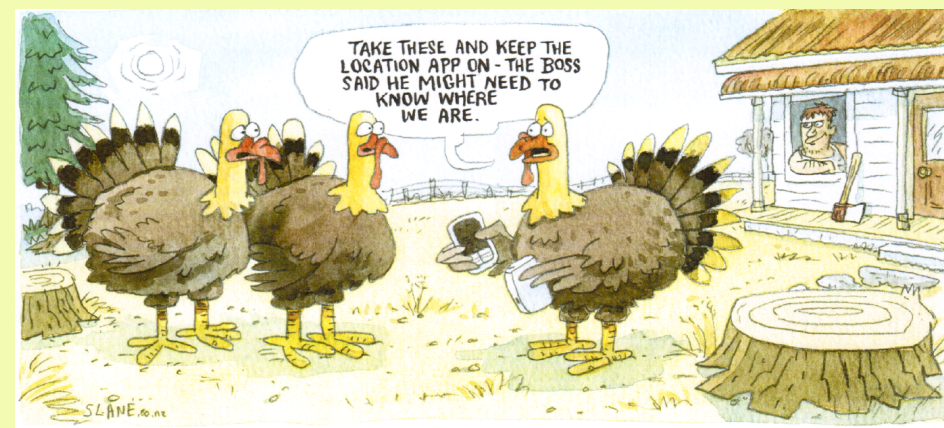
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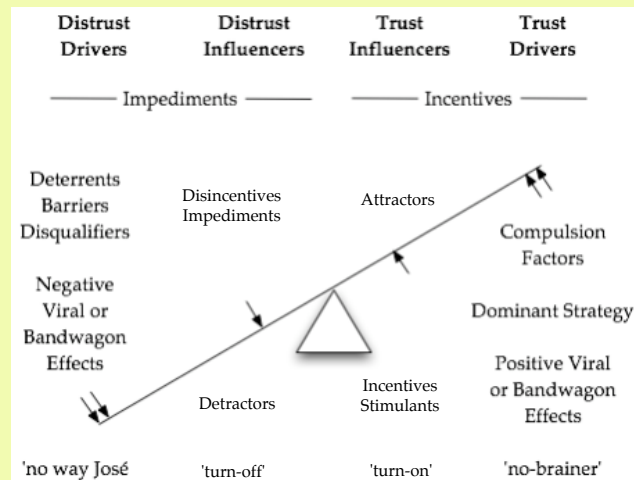


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Prioritisation of Privacy-Sensitive Features



COSM – Privacy-Sensitivity A Possible Set of Priority Features

Not 'The Default is Social'

Not Opt-Out

Consent-Based, incl.:

- Informed
- Freely-Given
- Granular not Bundled
- Settings Management
- Conservative Defaults

Trustworthy Terms

Identity Protections

- Protected Pseudonyms
- Multiple Identities
- Caveats, Social Norms and Reputations

Non-User Protections

- Content
- Social Networks

Location Protections

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Social Media and Privacy The Role of Law

- **Terms of Service**
 - Minimum Requirements / Conditions
 - Informed and Freely-Given Consent
 - Unilateral, Auto-Accepted Changes

Social Media and Privacy The Role of Law

- **Terms of Service**
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 - Market Power, so a Consumer Code

Social Media and Privacy The Role of Law

- **Terms of Service**
 - Minimum Requirements / Conditions
 - Informed and Freely-Given Consent
 - Unilateral, Auto-Accepted Changes
 - Market Power, so a Consumer Code
 - Unconscionable Terms:
 - Reactive Controls
 - Proactive Controls

Social Media and Privacy The Role of Law

- **Privacy Law**
 - Transparency re Data Handling
Collection, Retention, Use, Disclosure
(Overview, plus Drill-Down)

Social Media and Privacy The Role of Law

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(Overview, plus Drill-Down)
 - Privacy of the Person / Human Security
 - Default Settings
 - Nymity / 'Real Names'
 - Geo-Location

Social Media and Privacy The Role of Law

- **Privacy Law**
 - Transparency re Data Handling
Collection, Retention, Use, Disclosure
(Overview, plus Drill-Down)
 - Privacy of the Person / Human Security
 - Default Settings
 - Nymity / 'Real Names'
 - Geo-Location
 - Rights for Third Parties, to
overcome the Privity Limitation

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Drill-Down

Slides

The Existence of Cultural Affinity

Feasible

- Kin
- Community ('Barn-Raising')
- Cooperatives, e.g. credit unions ('They are Us')

Infeasible

- For-Profit Corporations ('Horse-Trading')
Corporations law demands that priority be given to
the interests of the corporation above all other
interests – customer service, society and
environment are constraints, never objectives
- An ersatz form of trust, or a proxy for it

Sources of Trust

- **Direct Relationship**
Kinship, mateship, maybe principal-agent, contract, multiple prior transactions
- **Direct Experience**
Prior exposure, a prior transaction
- **Referred Trust**
'Word-of-mouth', reputation, accreditation
- **Symbols of Trust or Images of Trust**
Brands, meta-brands

Examples of Factors That Inculcate Trust

- **Transparency and the Availability of Evidence:**
 - the Identity and Location:
 - of the Tradable Item
 - of other Parties
 - of the Marketplace Operator
 - Service Longevity and Reliability
- **Security of Transaction Data**
- **Risk Allocation / Clarity of Risk Exposure**
- **Safeguards**, such as warranties, recourse, insurance, a credible insurer of last resort

Qualities Involved in an Act of Trusting

- **Information About Risks**
well-informed, informed, ill-informed, 'blind'
- **Degree of Control over Risks**
tight, some, none
- **Judgement about Risks**
well-considered, considered, ill-considered, naive

Determinants of the Importance of Trust

- The extent of knowledge about the Risk Factors
- The degree of Risk Exposure
- The degree of understanding of the Risk Exposures
- The relative power of the Parties
- The duration of the Risk Exposure
- The availability, affordability of effective insurance
- The hedonic value / desirability / compulsion of the tradable item

Trust in What?

- The counter-party to the transaction
- The quality of the tradeable item or service
- The fit of the item or service to the need
- The delivery process
- The infrastructure and institutions on which the conduct of the transaction depends

COSM Functionality

- **Interaction**
Messaging, Tagging,
Profile, Groups,
Tag-Based Notifications
- **Broadcast**
Content-Posting, Blogging,
Micro-Blogging, Tagging,
Commenting
- **Sharing**
Content-Search, Re-Posting,
Tagging, Commenting

COSM Functionality

- See Content in any format
- Comment on Content
- Draw Content to the attention of others
- Post Content in any format
- Manage the Accessibility of your own Content
- Exchange messages with individuals, and Groups
- Create and maintain Groups / Social Networks
- Manage your own Membership of them
- Manage your own Profile and Personas

Consumer-Oriented Social Media Risk Assessment

- (0) The Mainstream Security Model
- (1) The Technical Architecture
- (2) The Commercial Architecture
- (3) The Transaction Process Aspect
- (4) The Harm Aspect
- (5) The Vulnerability Aspect
- (6) The Threat Aspects
- (7) The Safeguards Aspect

Consumer Requirements and Risks – 1 of 3

The Basic Needs

- Does it do what I want it to do? [Fit]
- Will it be there when I want it? [Availability, Reliability]

Consumer Requirements and Risks – 1 of 3

The Basic Needs

- Does it do what I want it to do? [Fit]
- Will it be there when I want it? [Availability, Reliability]

The Basic Protections

- How do I keep going if it stays fallen over for a long time? [Service Interruptions]
- Will you respond helpfully and quickly enough when I ask for help? [Customer Service]
- Will you lose my data, or muck it up? [Data Integrity]
- Do I get my data back if you fall over or withdraw the service? [Survival]
- Can I move my data to another supplier? [Lateral Compatibility]
- Who can I complain to if I get duded, and will they actually help me? [Consumer Protection]

Consumer Requirements and Risks – 2 of 3

More Advanced Needs

- Will it keep doing what it does now? [Service Integrity]
- Will it stay up-to-date? [Future Fit]
- Will it fall over too often? [Robustness]
- Will it come back quickly after it falls over? [Resilience]
- Is my service protected against you, them and the gods? [Service Security]
- If bits of it are broken, will you fix it without breaking it some more? [Maintainability]
- Can I fiddle with it a bit if I need to? [Flexibility]
- Can I move my data to an upgraded version? [Forward Compatibility]
- How long will old versions keep working for me? [Backward Compatibility]
- Am I breaking the law if I use the service? [Legal Compliance]

Consumer Requirements and Risks – 3 of 3

More Advanced Protections

- Am I going to get gouged? [Cost]
- Can only appropriate people get in and do things? [Authentication and Authorisation]
- Can I get access to all data that you hold about me? [Subject Access]
- Is my data protected against you, them and the gods? [Data Security]
- Is my privacy protected against you, them and the gods? [Privacy Controls]
- If I terminate our relationship, will my data be irretrievably deleted? [Fully Effective Withdrawal]
- What happens to my data if I die? [Archival / Memorialisation]

COSM Exemplars

- **Freenet**
en.wikipedia.org/wiki/Freenet
- **Diaspora**
diasporaproject.org/
github.com/diaspora/diaspora/
wiki/FAQ-for-Users
- **GNU social**
www.gnu.org/software/social
- **Buddy Press** (Wordpress)
buddypress.org
- **Duuit**
duuit.com
- **OpenSocial**
...
- **elgg.org**
...
...
...
- **Cambridge Project**
perscon.net
...

Diaspora Features

- **Distributed Content and Control** (partial P2P)
 - Community 'Pods' (servers), or host-your-own
- **Interoperability** (emergent)
 - Public posts are open, public web-pages
 - Cross-posting – to Facebook, Twitter, Tumblr
- **Profiles** (all items optional)
 - Public Profile, open to the world
 - Private Profile, open to anyone in your Aspects
 - 'Aspect' (a poorly-conceived identity / persona, but merely a Group of other Diaspora users)

Diaspora Profile Data and Settings

- **Public Profile** First name, Last name,
Self-Description in 5 words, Photo
- **Private Profile** Bio, Location, Gender, DoB,
Allow Search for You Y/N
- **Settings**
 - Language
 - Stream (Display 'Community Spotlight' Y/N)
 - Following (Auto follow-back Y/N)
 - Re-enable Getting Started Advice
 - Receive Email Notifications when ...
(all are conservative defaults)

COSM Parallel Developments

- **Social Media for the Enterprise**
Closed-Population, Higher-Security
e.g. <http://status.net>, <http://status.net/features>
- **'Federated Social Web'**
Interoperable, but otherwise just as exploitative
W3C Federated Social Web Community Group
<http://www.w3.org/2005/Incubator/federatedsocialweb/>
<http://www.w3.org/community/fedsocweb/>
<http://www.w3.org/2005/Incubator/federatedsocialweb/wiki/Projects>
(Of the 32 projects listed, the one-line descriptions of just 1 mentions privacy)
(Many have already failed, within their first couple of years)
http://en.wikipedia.org/wiki/Distributed_social_network

W3C 'Federated Social Web' Community Group

Why Federation? Case for individuals

http://www.w3.org/2005/Incubator/federatedsocialweb/wiki/Case_for_individuals

- Choose where your data is
- Choose tools and features
- Robustness / Resilience
- Free market consumer rights
- Jurisdiction over your data
- Your data in one place
- I use my tool, you use yours
- Depend on open technology

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COSM

'Federated Social Media' Talk-Fests

- **Federated Social Web Summit**, Portland OR, Jul 2010
"Invite only. Implementers only"
http://www.w3.org/2005/Incubator/federatedsocialweb/wiki/Federated_Social_Web_Summit_2010
- **Federated Social Web Europe**, Berlin, June 2011
<http://d-cent.org/fsw2011/>
- **Federated Social Web Summit**, SFO, 26 Oct 2012
"Closed door but knockable"
http://www.w3.org/2005/Incubator/federatedsocialweb/wiki/Federated_Social_Web_Summit_2012
- **Social Standards: The Future of Business**, SFO, 7-8 Aug 2013
<http://www.w3.org/2013/socialweb/>

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COSM Business Models

A Business Model
is an Answer
to the Question:

Who Pays?

For What?

To Whom?

And Why?

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COSM

Some Business Model Scenarios

- Consumers pay in cash rather than in data
- Consumers pay in cash for COSM features, or get the service gratis in exchange for their data
- A corporation funds open-sourced COSM by selling customised / value-added versions and/or selling their expertise to support custom-builds
- A corporation provides a gratis base-grade COSM, but offers more features in exchange for control over individual consumers' data
- A wealthy conservative organisation funds consumer-friendly social media services

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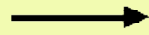


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Privacy-Sensitive Social Media Research Opportunities

Social Science

- Distinguish positive and negative Drivers from Influencers
- Measure the Strength of Influencers, under varying scenarios
- Assess trade-offs between positive and negative Influencers, under varying scenarios
- Prioritise possible privacy-sensitive features



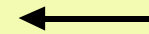
Design and Prototyping

- Specify Desirable Features
- Architect:
 - for Client-Server
 - for P2P
- Design and Code Open-Source Components
- Establish a Test-Harness and/or Demo Apps
- Publish Reference Code
- Publish Demo Apps

Privacy-Sensitive Social Media Research Opportunities

Field Research

- Study Exemplars
- Study the Use of Exemplars
- Study Non-Use
- Identify User Categories
- Prioritise the various privacy-sensitive features



Design and Prototyping

- Specify Desirable Features
- Architect:
 - for Client-Server
 - for P2P
- Design and Code Open-Source Components
- Establish a Test-Harness and/or Demo Apps
- Publish Reference Code
- Publish Demo Apps

Internet-Era Business Models Lessons from Open Source and Content

WHO PAYS? For What? To Whom? And Why?

- **Customers:**
 - for a Good or Service
 - for Complementary Goods or Services
- Providers
- **Third Parties – esp. Advertisers**
- **'A Fairy Godmother'**

Open Content Business Models Who Pays? A Fairy Godmother

- **Subsidy / Patronage**
Funding from 'external' sources
Deprecated as a gift, unless 'market failure'
- **Cross-Subsidy**
Funding from 'internal' sources
Deprecated (but less so), because it's 'distortive'
- **Portfolio Approach**
Mutual Cross-Funding from 'internal' sources
How business works – 'cash cows' fund the rest

Internet-Era Business Models Lessons from Open Source and Content Who Pays? FOR WHAT? To Whom? And Why?

- **Goods & Services**
- **Value-Added Goods & Services**
- **Complementary Goods & Services**
- Data
- Information
- **Expertise / Knowledge**
- An Idea in Good Standing
- **Timeliness**
- **Quality**

Internet-Era Business Models Lessons from Open Source and Content Who Pays? For What? To Whom? AND WHY?

The Negative

- **Resource Control**
- **Switching Costs (capture, lock-in)**
- Grief Avoidance

The Positive

- **Perceived Value**
(‘the genuine article’)
- **Cost Advantage**
(incl. Time)
- **Quality Advantage**
(incl. accuracy, security, timeliness, completeness, complementary services)