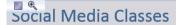
## Script generated by TTT

Title: groh: profile1 (05.05.2015)

Date: Tue May 05 15:02:17 CEST 2015

Duration: 86:37 min

Pages: 61







## (Chat)

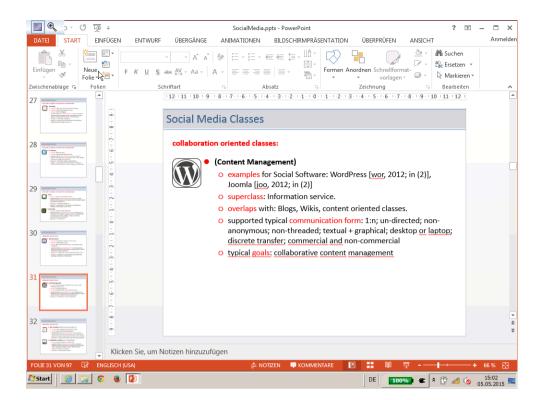
- O superclass: direct communication services.
- supported typical communication form: m:n and 1:1; mostly directed; non-anonymous; nonthreaded; textual; desktop or laptop; streaming; non-commercial
- typical goals: informing, chatting, etc.
- usually not considered to be social media but matching our definition of Social Media in case of n:m



## Social Games

- O examples: Farmville, World of Warcraft
- supported typical communication form: 1:1, m:n; directed; nonanonymous; non-threaded; via game elements emulating human social interaction; mobile, desktop or laptop; streaming, commercial and non-commercial
- o typical goals: entertainment





# Social Media Classes

## collaboration oriented classes:



## (Revision Control)

- o example Social Software: SVN [svn, 2012; in (2)].
- superclass: Information services.
- O overlaps with: content oriented classes, especially document management.
- supported typical communication form: 1:n; undirected; nonanonymous; threaded; code; desktop or laptop; discrete transfer; commercial and non-commercial
- o typical goals: collaborative code development for Open Source
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# Social Media Classes

## collaboration oriented classes:



## (Content Management)

- examples for Social Software: WordPress [wor, 2012; in (2)],
   Joomla [joo, 2012; in (2)]
- O superclass: Information service.
- overlaps with: Blogs, Wikis, content oriented classes.
- O supported typical communication form: 1:n; un-directed; non-anonymous; non-threaded; textual + graphical; desktop or laptop; discrete transfer; commercial and non-commercial
- o typical goals: collaborative content management

R

## Social Media Classes

## collaboration oriented classes:



- Open Innovation platforms (see also (2) chapter 11).
  - o example: Open-I platform (see [ope, 2011; in (2)].
  - o overlaps with: Social Networking platforms.
  - supported typical communication forms: 1:n, 1:1 and m:n; directed and un-directed; non-anonymous; threaded; textual + graphical; desktop or laptop; discrete transfer; non-commercial
  - typical goals: develop and incubate ideas and project proposals.



- (Collaborative Creativity services and platforms).
  - O example: IdeaStream [Forster, 2010; in (2)].
  - supported typical communication form: m:n; un-directed; anonymous and non-anonymous; threaded and non-threaded; textual + graphical; desktop or laptop; discrete transfer; commercial and non-commercial
  - O typical goals: develop and rate ideas.



## Social Media Classes

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## Social Networking and related classes



## Social Networking platforms

- o example: Facebook
- o example Social Software: Elgg [elg, 2012; in (2)].
- O supported typical communication forms: 1:n, 1:1, and m:n; directed and un-directed; non-anonymous; threaded and non-threaded; textual, contextual, and photos; desktop or laptop; discrete transfer; non-commercial ♣
- o goals: maintain and expand social network (including self-presentation).



## Mobile Social Networking platforms

- Comparable to Social Networking platforms with an emphasis on mobile usage, contextual content elements and context awareness of services
- super-class: Social Networking platforms.



## Social Media Classes

## Social Networking and related classes

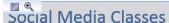


## Partner finding / dating or friend finding platforms

o example: Friendscout24 [fri, 2012; in (2)], Tinder [tnd, 2014]

R

- comparable spectrum of services to SN platforms, with less focus on social network management.
- o overlaps with: Social Networking platforms.
- o most important communication form: 1:1; directed; nonanonymous; non-threaded; textual + photo; discrete transfer; non-commercial; (e.g. messaging, chat); also 1:n; indirect (profile related services and service elements).
- O goal: finding a partner, sports-partner, spare-time friends etc.



## Social Networking and related classes



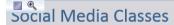
## Social Networking platforms

- O example: Facebook
- o example Social Software: Elgg [elg, 2012; in (2)].
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- Comparable to Social Networking platforms with an emphasis on mobile usage, contextual content elements and context awareness of services
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## Social Networking and related classes



## Community platforms

- comparable to Social Networking platforms, supporting smaller and more specialized groups of users (in terms of interests or location).
   Examples: Gothic.net [got, 2012], Yelp [yel,2012] meta-community platform.
- overlaps with: Social Networking platforms, Open Innovation platforms

## goal oriented classes



## Altruistic Community platforms

- o examples:
  - Utopia [uto, 2012; in (2)]: support sustainable consumption,
  - Causes [cau, 2012; in (2)]: meta-community platform for communities focusing on social issues,
  - IndieGoGo [ind, 2012; in (2)]: crowd funding
- o spectrum of services and communication forms comparable to other Community platforms.
- O superclass: community platforms
- overlaps with: Social Networking platforms, Political Community platforms.

## \_

# Social Media Classes

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# Social Media Classes

## goal oriented classes



## Political Community platforms

- o example: Occupy movement platforms (e.g. Occupy Wallstreet [occ, 2012; in (2)]), Wikileaks [wik, 2012c; in (2)].
- O overlaps with: altruistic community platforms.
- Wikileaks: may not be a typical Social Media service since not as open for uncontrolled user-generated content; relies on whistleblowers
- implements a special form of 1:n, anonymous, indirect, textual form of communication
- goal: function as control instance for organizations, governments and companies via leaking classified information documenting unethical behavior.



## Knowledge Codification services

- o example: Wikipedia;
- o may be listed here as well



# Social Media Classes

## classes with an emphasis on content



## Events services / platforms

- example: Eventful [eve, 2012; in (2)] (users can upload, comment, demand, state planned attendance for events).
- most important communication forms: 1:n, n:m; indirect; anonymous and non-anonymous; non-threaded; contextual (spatio-temporal), textual + photo; mobile, desktop, or laptop; discrete transfer; non-commercial;
- O goals: awareness, information in view of events.
- o superclass: Awareness services.
- slightly overlaps with: Microblogging; overlaps with: News services.



## classes with an emphasis on content



News

- example: Digg [dig, 2012; in (2)] (users can submit and rate news articles).
- o overlaps with: events services.
- O superclass: Information services
- most important communication forms: 1:n, n:m; indirect; anonymous and non-anonymous; non-threaded; textual, contextual (user-item relations); desktop or laptop; discrete transfer; non-commercial
- o goals: awareness, information.



# Social Media Classes

## classes with an emphasis on content



(Document Management services.)

- example: Google Docs [goo, 2012a; in (2)]: sharing and editing documents.
- O overlaps with: Information services, Content Sharing.
- o may also be listed under `Collaboration oriented classes'
- most important communication forms: 1:n, n:m; indirect; nonanonymous; non-threaded; textual; desktop or laptop; discrete transfer; non-commercial
- o goals: distributed document management.
- usually not considered Social Media, partly matches our definition though

# Social Media Classes

## classes with an emphasis on content



Knowledge Codification services

- O example: Wikipedia
  - example Social Software: Web-Protege [Tudorache et al., 2008; in
     for collaborative ontology development.
  - heavily overlaps with: Wikis. overlaps slightly with: Document Management.
  - o most important communication form: n:m; indirect; anonymous; non-threaded; textual and formal formats for knowledge representation (e.g. Semantic Web [Antoniou and Van Harmelen, 2004; (2)]); desktop or laptop; discrete transfer; non-commercial
  - goals: codify knowledge (e.g. in the form of encyclopedias or ontologies)
  - may also be listed under `goal oriented classes' and `collaboration oriented classes'.



# Social Media Classes

## classes with an emphasis on content



- Content Sharing services.
  - o content (own or other) is shared `as is' (no editing as in Wikis)
  - subclasses: File, Video, Photo, Presentation Sharing, Social Bookmarking, Blogs.
  - O superclass: Information services
  - typical form of communication: 1:n; indirect; anonymous and nonanonymous; non-threaded; diverse range of content types; desktop or laptop; discrete transfer and streaming; noncommercial
  - o goals: diverse.

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# Social Media ↔ Social Games

## **Games, Social Games**

## play:

- free, voluntary
  - [Huizinga, 1939; in (1)],[Caillois, 1961; in (1)]
- outside "ordinary" life. "not serious" [Huizinga, 1939; in (1)],
- unproductive [Caillois, 1961; in (1)]
- subjective [Frasca, 2007; in (1)]
- engaging [Frasca, 2007; in (1)]
- absorbing the player intensely and utterly [Huizinga, 1939; in (1)].
- make believe [Frasca, 2007; in (1)], [Caillois, 1961; in (1)] (→ blurring: real - virtual, true - fictionous);
- play as the imaginary [Sutton Smith , 1997; in (1)]:
- rules
- [Huizinga, 1939; in (1)] [Caillois, 1961; in (1)] [Suits, 1978, in (1)]

## **Social Media**



SM is not "outside ordinary life", but rather outside many aspects of "serious" life . SM



seen as communication support → cross divisional role of SM

- - must be negated for knowledge codification, collaboration classes etc.
- - insofar as communication is subjective
- yes but not exactly as much as for games
- **(**(**✓**))

only insofar as the communicated contents are intended or absorbed in an imaginary / make believe way

rules of social interaction, emergent special rules of SM (e.g. "nettiquette")

# Social Media Classes

## classes with an emphasis on content



- File Sharing services.
  - o examples / example social software: BitTorrent [bit, 2012; in (2)] Peer-to-Peer file sharing protocol and abstract distributed service.
  - O superclass: Content Sharing.



- Video Sharing services
  - O example: Youtube
  - O superclass: Content Sharing



- **Photo Sharing** services
  - o example: Flickr [fli, 2012; in (2)]
  - O superclass: Content Sharing



- Teaching Material Sharing services:
- o example: Slideshare [sli, 2012; in (2)]
- o superclass: Content Sharing

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# Social Media ↔ Social Games

Games, Social Games	Social Media	
game:		
<ul><li>social</li></ul>	✓	
[Frasca, 2007; in (1)]		
• rules	<b>√</b>	
[Frasca, 2007; in (1)] [Juul, 2005; in(1)] [Salen and Zimmerman, 2004 in (1)] [Juul, 2005 in (1)]		
<ul> <li>utility function for states and outcomes</li> </ul>	1	
(inspired by social motives): [Frasca, 2007; in (1)] [Juul, 2005; in(1)]	•	
<ul> <li>→ cooperation, competition</li> </ul>	1	
[Salen and Zimmerman, 2004 in (1)]		
<ul> <li>active player participation, effort, skills</li> </ul>	✓	
[Frasca, 2007; in (1)] [Juul, 2005; in(1)]		
<ul><li>emotional attachment</li></ul>	✓	
[Juul, 2005; in(1)]		
<ul> <li>emergent (social) systems</li> <li>[Salen and Zimmerman, 2004; in (1)]</li> </ul>	<b>7</b>	
<ul><li>game: "a problem-solving activity,</li></ul>	./	
approached with a playful attitude" [Schell 2010; in (1)]	•	
• chance + uncertainty [Salen and Zimmerman, 2004 in (1)]	₩	
• systems of information		
[Salen and Zimmerman, 2004 in (1)]	<b>4</b>	

# Social Media ↔ Social Games

Games, Social Games	Social Media
<ul> <li>[Novak, 2012; in (1)]:         <ul> <li>extrinisic / intrinsic motivation</li> <li>seamless technology: deep embedding into all day life / blurring between virtual and real (especially in Pervasive Games)</li> <li>interaction forms: information retrieval, immediate social interaction&gt; involves communication</li> </ul> </li> </ul>	✓ ✓
[Klastrup, 2003; in (1)]: spatiotemporal context ↔ social play	✓ (see later in slides)
[Steinkuehler and Williams, 2006; in (1)]: groups and their social context important in games	✓ (see later in lecture)
[Isbister, 2009; in (1)]: key elements of social play: emotional contagion, performance / Hawthorne effect, learning, relationship building	√ (editorial story / story elements missing / created by interacting users

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Games, Social Games	Social Media
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approached with a playful attitude [schell 2010; in (1)]  chance + uncertainty [Salen and Zimmerman, 2004 in (1)]  systems of information  [Salen and Zimmerman, 2004 in (1)]	✓ ✓

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# Social Media ↔ Social Games

Social Media ↔ Social Games	
Games, Social Games	Social Media
[LeBlanc, 1999; in (1)], [Hunicke et al., 2004; in (1)]: Fellowship fun [Lazzaro, 2009; in (1)]: People Fun [Wang and Sun, 2011; in (1)]]: social value as characteristic of reward, sociality as utilization of reward	✓ ✓ <-> "like" in Facebook
<ul> <li>[Maslov, 1943 in (1)]→[Schell, 2010 in (1)]:     most achievements of games:         <ul> <li>Self Esteem level</li> <li>Belonging Love level (social games)</li> </ul> </li> <li>[Radoff, 2011; in (1)]:     most players develop into socializers over time</li> </ul>	✓ ✓
• [Juul, 2005; in (1)]: narrative structure: games of emergence, games of progression <-> social media	<ul> <li>(✓) decentralized narrative structure; stories that emerge from social communication forms (blogs,</li> </ul>

# Social Media ← Social Games

Games, Social Games	Social Media
<ul> <li>game meta-types online + social (and to an extent mobile): (increasingly) important for all types of games</li> </ul>	<b>✓</b>
<ul><li>[Schell, 2010; in (1)]:</li><li>Transmedia worlds</li></ul>	✓
<ul> <li>schell [Schell, 2010; in (1)]:</li> <li>"elemental tetrad"</li> <li>Mechanics (rules, skill, space)</li> <li>Story</li> <li>Aesthetics</li> <li>Technology</li> </ul>	analogous term as for games
<ul> <li>game mechanics : emergent consequence of rules</li> </ul>	<ul> <li>(dynamics and mechanics: emergent consequences)</li> </ul>
No.	



# Social Media ↔ Social Games

Games, Social Games	Social Media
[Hunicke et al, 2004 in (1)]: games: "systems that build behavior via interaction"	✓
<ul> <li>[Hunicke et al, 2004 in (1)]:</li> <li>MDA framework (Mechanics, Dynamics, Aesthetics)</li> </ul>	<b>(✓</b> )
● player types	√ (  ← types of social media users (example: "hardcore"))

facebook-chronic)

# Social Media ↔ Social Games

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• player types	√ (  ← types of social media users  (example: "hardcore"))
(b) (P) (P) (Q) (***)	

## Social Media ↔ Social Games

## important common aspects Social Media ↔ (Social) Games:

- O mostly "outside" serious life, leisure time oriented, but: both: increasingly many "serious forms" (Serious Games, Company SN etc.)
- O communication as important element
- o defined set of rules
- O emergent mechanics & dynamics; transformative use
- o complex game worlds ↔ social information spaces
- o parallels in aspects of motivation, flow
- one often the "host" of the other (e.g. in Social Networking games)
- 0 ...



## Social Media ↔ Social Games

Social Media ↔ (Social) Games:

"unifying" class:

leisure time oriented applications, services and platforms

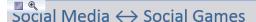


for this class: social contexts on various temporal scales play important role



we will define social context and investigate the role, applications and detection of social context using the example of **Social Networking** 

1



## important distinctive aspects Social Media ↔ (Social) Games:

Games, Social Games	Social Media
● main purpose: entertainment	<ul> <li>main purpose: communication &amp; awareness</li> </ul>
• stories and the imaginary `	<ul> <li>mostly related to user's real life</li> </ul>
<ul> <li>rules more explicit</li> </ul>	• rules often more implicit
<ul> <li>often: items manipulated: graphical characters, objects</li> </ul>	<ul> <li>items mostly manipulated: text, photos, videos</li> </ul>

# Social Networking

## Communities: (older term (since end of 1990s)):

- O groups of users associated with web-platforms that support their communication (direct ←→ indirect, 1:1 ←→ n:m, synchronous ←→ asynchronous) through services (discussion boards, chats, blackboards, messaging etc.) [Groh and Schlichter, 2005; in (2)]
- O Community types:
  - Communities of Interest [Koch, 2003a], [Carotenuto et al., 1999 in (2)],
  - Communities of Practice [Lesser and Storck, 2001; in (2)],
  - professional communities [Koch and Richter, 2009; in (2)],
  - Open Innovation communities (see (2) chapter 11)), etc.
- o earlier forms of networks: "Buddylists" etc.
- O often emphasis on distinct common pursuit, and / or collaboration
- O variant of Social Networking platforms which may be viewed as a development from community computing / community platforms



# Social Networking

**Social Networking**: class / paradigm in Social Computing:

- o users' main goal: maintaining and expanding their social network via communication
- O users explicate and maintain explicit model of social relations (→ social network) and user-item-relations (Facebook "like", comments etc.)
- O users socially interact using bundle of Social Media services (direct communication, information, awareness)
- O users have personal information spaces: sets of items associated with users that they exert control over or whose relations (user-item) they exert control over
- o a user has personal profile: publicly accessible sub-space of p.i.s.: used as personal reference: for introducing a person or used as reference point for SN services (e.g. awareness services)
- o communication: non-anonymous; content: mostly textual + photos + contextual; non-commercial; discrete transfer

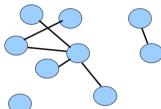


# Social Network

- definition (informal): Real World Social Network: set of humans together with all aspects of their social relations
- initial definition: Social Network Model Framework: mathematical representation (modeling) language for modeling real world social networks (often a graph formalism)
- initial definition: Social Network Model: graph G=(V,E):
  - o nodes V: represent humans (actors);
  - (undirected) edges E: represent binary social relations (ties)  $E \subseteq \begin{pmatrix} V \\ 2 \end{pmatrix}$
- definition: Social Network: instance of a Social Network Model
- !! distinguish between: Social Networking ↔Social Networking platform & ⇔ Social networking platform instance 
   ⇔ Social Network

# Social Network

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- definition: Social Network: instance of a Social Network Model



!! distinguish between: Social Networking ↔ Social Networking platform → Social networking platform instance → Social Network



# Social Networking Services

- awareness / contextual:
  - services for personal social network management (adding "friends" etc.),
  - O awareness services on social network (network analysis, alerts etc.)
  - services for privacy management
  - services for group management
  - o services for ratings, comments
- direct communication:
  - o synchronous + asynchronous, threaded + non-threaded, 1:1, 1:n, n:m, ...
  - o examples: chat, messaging, comments with substantial communicative content etc.
- information:
  - personal blogs + microblogs
  - bulletin boards (e.g. Facebook Chronic)

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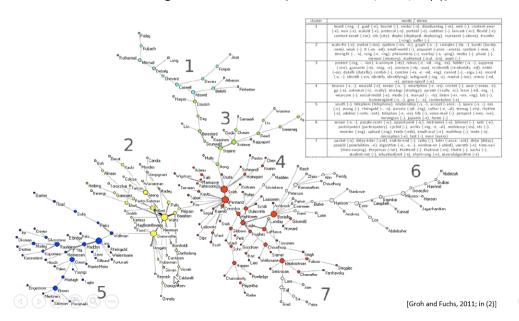
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# Niopile Social Networking

Mobile Social Networking: scientific view: see [Groh and Fuchs, 2011; in (2)]



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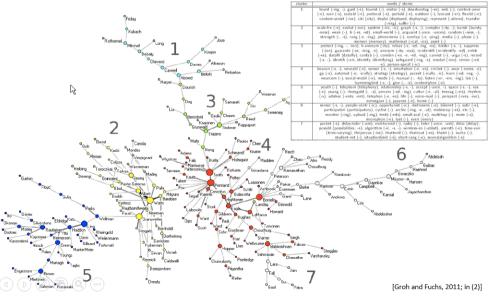
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## information:

- o personal blogs + microblogs
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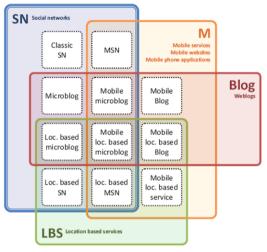
# working Networking

Mobile Social Networking: scientific view: see [Groh and Fuchs, 2011; in (2)]



# Nivopile Social Networking

Mobile Social Networking: actual realizations on the Web (as of 2009): see [Groh and Daubmeier, 2009; in (2)]





[Groh and Daubmeier, 2009; in (2)][Daubmeier, 2009; in (2)]

# iviopile Social Networking + Context

**MSN** is a form of SN with mobile UI AND acquisition and use of contexts induced by the mobile interaction scenario (deep embedding into all day life) via sensors conceptually connected to the mobile usage scenario (e.g. part of the mobile device)

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# Decentralized Social Networking + Social Semantic Web

#### solutions to Data-Silo-Problem:

O API-based solutions: example: Google Open Social [Open Social 2013]: "The ultimate goal is for any social website to be able to implement the API and host 3rd party social applications. There are many websites implementing OpenSocial, including Engage.com, Friendster, hi5, Hyves, imeem, LinkedIn, MySpace, Ning, Oracle, orkut, Plaxo, Salesforce.com, Six Apart, Tianji, Viadeo, and XING."

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- O Decentralized Social Networking:
  - P2P SN (e.g. LifeSocial [Graffi et al., 2010; in (2)]), Peerson [Peerson, 2013]))
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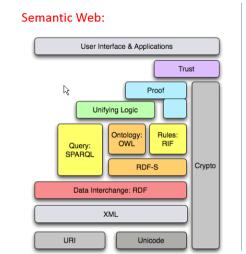
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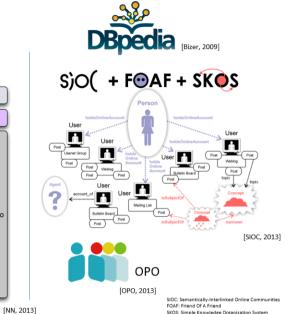
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# Decentralized Social Networking + Social Semantic Web

## Social Semantic Web





SKOS: Simple Knowledge Organization System OPO: Online Presence Ontology

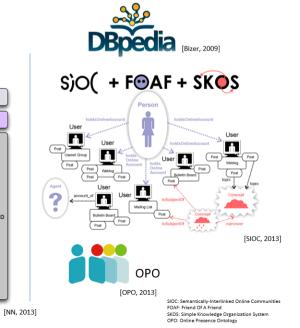
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## **Social Semantic Web**

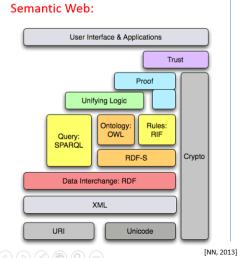
Semantic Web:

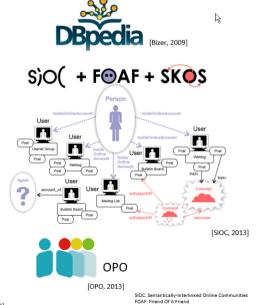
# User Interface & Applications Trust Proof Unifying Logic Ontology: Rules: RIF SPAROL RDF-S Crypto Data Interchange: RDF XML URI Unicode



# Decentralized Social Networking + Social Semantic Web

## Social Semantic Web

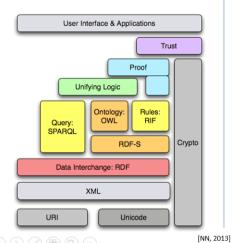


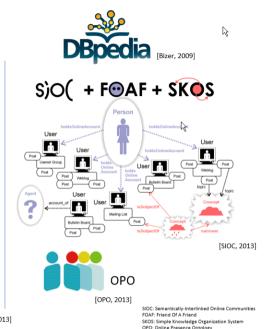


# Decentralized Social Networking + Social Semantic Web

## Social Semantic Web

## Semantic Web:





# IVISIN -> Context

#### Context:

- "[...] where you are, who you are with, and what resources are nearby. Context encompasses more than just the user's location [...]" [Schilit et al., 1994; in (2)].
- O "Context is any information that can be used to characterize the situation of an entity. An entity is a person, place, or object that is considered relevant to the interaction between a user and an application, including the user and applications themselves." [Dey, 2001; in (2)]

#### Context Awareness:

- "A system is context-aware if it uses context to provide relevant information and/or services to the user, where relevancy depends on the user's task" [Dey, 2001; in (2)]
- "Context is an operational term: Something is context because of the way it is used in interpretation, not due to its inherent properties." [Winograd, 2001; in (2)]

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  - O Identity, Location, Status [Dey et al., 2001; in (2)].
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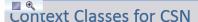
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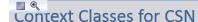
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## Context classes for Contextual Social Networking:

- Physical Context: at user's spatiotemporal location, independent of user: lighting, temperature etc.; also: computing context: at user's spatiotemporal location, independent of user: available bandwidth etc.
- O Individual Context of a user: location, speed, disabilities, personal physiological parameters etc.; computing context involving nature of her device(s), state of the applications running, precise state of interaction of user with device or application.
- Social Context: "social context refers to characterizing the social nature of the situation a user is currently in" (2): Social Context: models of any aspects of social interaction having a relation to IT systems.
  - short term: low level: e.g. set of ids of persons in Bluetooth range;
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