10041 Abstracts Collection
Perspectives Workshop: Digital Social Networks
— Dagstuhl Seminar —

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Abstract. From 24.01.2010 to 29.01.2010, the Dagstuhl Seminar 10041 "Perspectives Workshop: Digital Social Networks" was held in Schloss Dagstuhl – Leibniz Center for Informatics. During the seminar, several participants presented their current research, and ongoing work and open problems were discussed. Abstracts of the presentations given during the seminar as well as abstracts of seminar results and ideas are put together in this paper. The first section describes the seminar topics and goals in general. Links to extended abstracts or full papers are provided, if available.

Keywords. Digital Social Media, Social Software, Social Computing

10041 Executive Summary – Perspectives Workshop: Digital Social Networks

The Perspective Workshop on "Digital Social Networks" held in between January 25th and 29th, 2010 at the research centre Schloss Dagstuhl focused on technological, socio-economical, and political aspects of digital social networks, and, more generally, digital social media. Digital social media give rise to users and communities to collaboratively generate and exchange content and to interact. They enable social computation, i.e. computations that involve both software and groups of people. They are operated by specific software systems called social software and use information and communication technologies such as the Internet and Web technologies. Digital social media ease and strengthen social interactions by overcoming physical limitations in communication (like distance

and synchronicity) and alleviating human limitations like the number of people with whom one can maintain relationships. Digital social media build, and/or rely upon, social networks that might be the primary purpose of the media.

Community Equity — Towards a social reputation economy

Peter Reiser

Case Study: A case study of a successful deployment of a social community platform for 25'000+ global users based on a balanced approach of Technology, Community Methodology and a Community Value System.

- Technology:how to integrate commercial and open source technologies (Wiki, Forum, Blogs, Attachments, Microblogging, Rating, Tagging etc.) into a single Enterprise 2.0 platform
- Community Methodology: how to drive phenomenal adoption of the social community platform by implementing a consistent community methodology for the 500+ communities
- Value System (Community Equity): how to implement a Community Value system to dynamically compute the social value of information, people and tags.

Community Equity Overview: Community Equity is a social value system for online communities which evaluates the values of people, content and tags based on the social activities of community members.The Community Equity concept was invented by Sun Microsystems Inc. and has been open sourced in July 2009.

The Community Equity model assigns a value for each social activity. Furthermore each value has an aging time associated with it. This means that the value of an activity is reduced based on its aging over time. The assumption is that more current information has higher value. Based on these simple associations the Community Equity model calculates the following indicators:

- Information Equity (IQ)
- Personal Equity (PEQ=CQ+PQ)
- Contribution Equity (CQ)
- Participation Equity (PQ)
- Tag Equity (TQ)

Remark Dr. Sebastian Schaffert has submitted a talk about Kiwi — a EU FP7 founded research project which relates to this talk e.g it will outline on how Concept Equity (Community Equity + Semantic Web) can be used for dynamic expertise discovery and personalized recommendations based on the calculated social reputation of the community members. It would be good if his talk would be after this talk.

Keywords: Social networks, social capital, communities, value system, social network analytics

SIOC — Connecting User-Generated Content

Uldis Bojars

The amount of information being created and shared on the Social Web is constantly growing. The SIOC project is aimed at enabling interoperability between Social Web sites using Semantic Web technologies.

This talk introduces the SIOC project and describes the SIOC ontology — a standard way for representing rich data from online community sites and Web 2.0 tools.

We will describe an eco-system of applications that work with SIOC data, covering data creation, integration and use. Areas where SIOC has been used include:

  – expressing user-generated content as linked data;
  – integration of enterprise collaborative work environments;
  – social data portability.

Keywords: Social Web, Semantic Web, SIOC, FOAF, interoperability

The role of social media for personal media collections

Susanne Boll (Universität Oldenburg, DE)

Social media are receiving a great share of interest. Large sites have attracted enormous numbers of users that upload and share digital media such as videos and images but also text as can be found in blogs or wikis. Even though these sites are often well used they may not be THE central location where users actually store their content. With regard to photos we rather observe that the personal image collection mainly resides on the own, hopefully backuped, hard disk. However, the sharing of ones own photos reveals much about our photos as well as the sharing of related media content might well add to our personal photos. Consider just the simple fact that you have uploaded a few out of a large set of photos — this would mean that these are very important to me and maybe

to others. On the other hand our personal media collections are sternly to the media connections in the digital social networks — others have been traveling to the same place, taking the same pictures, making similar experiences that can be shared and augment the personal experience. In this presentation we will share the ideas of personal photo collections meeting the wisdom of social media.

Keywords: Social media, photo collections, meta-data, photobook

Gaming as social activity

Carsten Busch (Hochschule für Technik und Wirtschaft - Berlin, DE)

Gaming — no matter, whether it's done analog or digital — is a social kind of activity. The GamesLab of HTW in Berlin has made an investigation about Gaming in Germany. Some of the results of an representative survey are: Only 2 % of all Germans don't like to play analog or digital games; 95 % play at least occasionally board games, 43 % play at least occasionally video games or computer games; 74 % like "playing together with others, because it's communicative and interesting".

Keywords: Games

Full Paper: http://drops.dagstuhl.de/opus/volltexte/2010/2520

Click to Add Title — A Case for Social Media Interoperability

Clemens Cap (Universität Rostock, DE)

Current Wikipedia includist / excludist debates demonstrate conflicts in social media. A possible solution from the process side is to replace NPOV (neutral point of view) approach by a EPOV (every point of view, or every person owns a variant) approach. As a result a number of new issues arise, such as the correct designation for a text document being faked. The title of a text document is essential for finding the document, it is not arbitrary.

The talk presents a trust architecture for solving the problem by introducing a decentralized wiki-hub concept.

Keywords: Interoperability, social media

Psychological Dimensions of Digital Social Networks

Nicola Doering (TU Ilmenau, DE)

The growing body of (social) psychological research on Social Network Sites (SNS) such as MySpace,Facebook, StudiVZ, LinkedIn or Xing focuses mainly on

- identity management (e.g., self presentation, impression formation) and
- relationship management (e.g., social interaction, social capital).

The talk summarizes the current state of social psychological SNS research.

It addresses theoretical concepts and research designs and reports key results for different user groups.

Practical implications for both SNS users (media competence) and SNS providers (site development) are discussed.

Directions for future social psychological SNS research are suggested.

Alternative, more promising IT paradigms for Digital Social Networks

Kalman Graffi (TU Darmstadt, DE)

Social networking sites are web-based platforms allowing users to publish personal profiles, link each other, post pictures, blog entries, join groups and search for friends. Several hundred millions of users participate in today's social networks like Facebook, MySpace or StudiVZ. However, due to the centralized character of these platforms, high server maintenance cost exists. Still, many popular sites do not generate sufficient profit to maintain their platform and require external financial support.

Alternatives to centralized infrastructures exist in various other popular applications like Skype or BitTorrent. A p2p-based approach solves the load and cost issues, but also leads to new challenging research issues. However, we at Multimedia Communications Lab at Technische Universität Darmstadt have researched and developed a functional prototype for a p2p-based social online network, called LifeSocial (www.lifesocial.org). It provides the same functionality as popular online social networks and goes even beyond their capabilities by providing plugins for direct user cooperation.

We believe that social online networks could benefit essentially from p2p based solutions as well as that the next big application area for the p2p paradigm is to be found in online social networks.

Keywords: Digital Social Networks, Architecture, System Design, Peer-to-Peer, Scalability

Exploiting Social Media for Information Retrieval

Andreas Henrich (Universität Bamberg, DE)

User generated tags, comments, or reviews seem to be valuable sources of evidence when determining search results. This is especially true for multimedia data, since – in contrast to text – images, videos, or audio files hardly reveal high level information about their content.

Especially user generated tags associated with images on social media sites, such as flickr.com, at first glance promise to be an interesting asset for image retrieval. Unfortunately, a closer look brings up serious limitations. A huge amount of images at social media sites are not tagged at all. Many tags are of low quality and very subjective. A small number of tags will never be a sufficient representation describing all the different associations an image can bring up in the eye of the beholder. Finally, the characteristics of folksonomies and the influence of tag suggestions or bulk tagging lead to some strange effects with respect to tag distributions and tag quality.

Given this context the talk tries to address the following aspects:

— How can user generated annotations be used to improve image retrieval?
— How do the special characteristics of tags influence the effectiveness of text retrieval techniques?
— How can content-based retrieval techniques and tag-based retrieval techniques be combined?

Keywords: Information Retrieval, Social Media, Image Retrieval, Hybrid Retrieval Techniques

Knowledge Discovery in Folksonomies

Robert Jaeschke (Universität Kassel, DE)

Social bookmarking systems allow users to organize and share bookmarks, photos, etc. on the web. The reason for the success of these systems lies mainly in the fact that no specific skills are needed for publishing and editing. In this talk we give an overview on our research in the field of social bookmarking and present our social bookmarking system BibSonomy. Topics include ranking, spam detection, tag recommendation, and ontology learning.

Keywords: Folksonomy, knowledge discovery, collaborative tagging, bibsonomy

Joint work of: Jaeschke, Robert; Benz, Dominik; Hotho, Andreas; Krause, Beate; Schmitz, Christoph; Stumme, Gerd; Eisterlehner, Folke

Community Mirrors — Using public shared displays to move information "out of the box"

Michael Koch (Univ. der Bundeswehr - München, DE)

CommunityMirrors make information, e.g. personal content from social networking services which are usually hidden inside of information systems available in a new and innovative way.

In semi-public places like lobbies or coffee corners people can see, touch and experience digital content and find information by chance without having to look for it explicitly. Intuitive presentation and interaction possibilities on large touch screens improve the visibility of information, the awareness about what is happening in the underlying systems and last but not least the appreciation for information providers. Through the integration into the user's social context CommunityMirrors support the communication between people standing in front of the screen and so finally enhance the motivation of information providers for the generation of new content. We have successfully used the CommunityMirror concept and software framework to create visual and interactive participant lists for conferences visualizing the social network of the participants, and will report our findings.

Keywords: Ubiquitous computing, large screen, visualization, community, social network, communitymirror

On the locality of virtual networks: Informal learning in the San Francisco Bay Area

Julia Maintz (Maintz Research, DE)

Since the 1990s, informal and personal networks have gained increasing attention as repositories of learning and innovation.

Social network analyses so far largely concentrate on the impact of network structures on innovation processes.

The role of social network dynamics and the interrelation of structure and agency in these processes however need to be more intensively analyzed.

This research concentrates on learning dynamics in personal online business networks of communication and computing industry professionals based in the San Francisco Bay Area.

The technological potential for online global multi-connectivity of the studied LinkedIn networks showed limited realization due to the users' stickiness to their physical practice communities and localities.

Physical social interaction served as the prime motor of network formation and maintenance.

Keywords: Innovation, personal online networks, physical space, qualitative social network analysis

Full Paper: http://drops.dagstuhl.de/opus/volltexte/2010/2519

Research agenda: Aligning quantitative and qualitative social network analyses

Julia Maintz (Maintz Research, DE)

So far quantitative and qualitative social network research takes place in parallel, however rarely in a combined form which would allow for the data and methodological triangulation of findings.

Especially the study of digital social networks would benefit from a procedure that acknowledges the potentials of both quantitative and qualitative research: Quantitative social network analysis allows to identify structuring processes of digital networks based on large data amounts.

However, drivers for the identified structuring processes can frequently not satisfactorily be captured.

Here, qualitative social network analysis can deliver data and reflect motivations for network formation processes (e.g., through qualitative interviews with persons in central network positions, qualitative coding of central network site data).

Issue Monitoring — Topic Diffusion in Online Media

Mathias Priebe (Volkswagen AG - Wolfsburg, DE)

Due to the fact of differentiating markets a company's reputation becomes a vital asset in building stakeholders trust. Public opinion, built upon public information, plays a key role in corporation's reputation. The mass media and increasingly the online media (online news & weblogs) are the main providers of public information and therefore make up a large part of what people perceive as reality. An information overload as the result of the growing world wide web makes it harder for organizations to recognize the main aspects in a fragmented topic landscape created by the media. With special interests in understanding the topic diffusion in online media an integrated approach will be introduced to identify and monitor organizational relevant topics based on several text mining methods (Topic Detection and Tracking, Sentiment Analysis).

Keywords: Issue Monitoring, Topic Detection and Tracking, Reputation, Sentiment Analysis

KiWi — A Platform for Semantic Social Software

Sebastian Schaffert (Salzburg Research Forschungsgesellschaft m.b.H., AT)

This talk demonstrates KiWi, a platform for building various kinds of Semantic Social Software.

Social Software — by definition — is software that connects people, and KiWi aims to extend this connection to different applications at the same time, while keeping track of user's interaction with the system and representing this information in open, standardised Semantic Web formats so that it can be connected with other kinds of information, e.g. on content, history and similar. Part of the presentation will be a demonstration of the KiWi system itself as well as the TagIT (geolocated, user generated news) and the Wiki applications that build on top of it and share content and data. KiWi connects with social networking services like Facebook and also integrates FOAF+SSL and Sun's Community Equity system, presented in a separate talk by Peter Reiser.

KiWi is a collaborative project partly funded by the European Union under contract no. 211932. TagIT is a project partly funded by the Austrian government and the State of Salzburg as part of the industrial competence centre Salzburg NewMediaLab.

Keywords: Kiwi, wiki, social software, social media, semantic web

Joint work of: Schaffert, Sebastian; Stroka, Stephanie; Kurz, Thomas

Securing the Social Web with foaf and ssl

Henry Story (Sun Microsystems - Menlo Park, US)

Over the past years, Social networks have grown exponentially, capturing media and political attention world wide. But they suffer from very deep systemic problems: centralization of information, data ownership, and security issues of various kinds. We will show in detail what these problems are and how they can be resolved by building a Social Web that is completely distributed, secure and with no central point of control – all this using only well established web standards.

Keywords: Semweb

The Future of Mobile Social Networking?

Matthias Wagner (DOCOMO Euro-Labs - München, DE)

For most of us, mobile phones and mobile communication are established as primary communication channels in our everyday as well as our social life. The fact that mobile communication devices are carried with us almost all the time and nearly everywhere we go, seems to make them perfect tools for what is commonly characterized as Mobile Social Networking. With this talk we want to stimulate the discussion on the convergence of digital social networking services and the mobile application space. Is there really a big future for Mobile Social Networking? What will it depend on? What are the most crucial requirements and research questions?

Keywords: Mobile Social Networking, Context Awareness, Personalization

Full Paper:
 http://www.iyouit.eu/