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INTERSOCIAL: Unleashing the Power of Social Networks for Regional SMEs

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Report on the seminar on social web

Deliverable D5.1.1.a Action 5.1

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Purpose: Report on the organization and the results of the first INTERSOCIAL project

Results: Knowledge transfer among the participants, transfer of technology know-how regarding the use of social web

Conclusion: There is an increasing interest on social web but to successfully explore the opportunities offered many aspects (technological, economical, social) need to be addressed

Approved by the project coordinator: Yes

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When	Who	Comments
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Report on the Seminar on Social Web

Section 1 Overview

In recent years, we have witnessed an unprecedented growth of social networking. Social networks offer new means and forums for world-wide product promotion as well as huge repositories of data for advanced market analysis and trend identification

The InterSocial project, funded in the frame of the Territorial Cooperation Program aims at exploring social networking to enhance the competitiveness of small and medium enterprises (SMEs) in neighboring regions of western Greece and south Italy. In particular, the project aims at promoting advanced new technologies as related to the use of social networking to both (a) improve the web presence of SMEs and (b) use information provided by such sites for targeting advertisement and adaptive service provision.

The “*1st InterSocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)*” was the first public activity of the project. The objective of the workshop was to bring together researchers and practitioners to discuss the challenges and the perspectives of social networks and in particular the opportunities that social networks offer to the SMEs of the deprived regions of the south Europe, also with respect to the current conditions of the economic crisis.

The event took place on June 15, 2012 in Achaia Beach Hotel in Patras. It has drawn the attention of a wide audience in the regions concerned, beyond the project partners.

The program of the workshop included talks both from industry and academia. The speakers brought various perspectives, including technology aspects with regards to software tools and innovative algorithms, social sciences, communication theorists and economics. Examples of good practices were presented referring to sectors such as learning, games, cultural institutions, and retail and manufacturing.

This report includes material regarding the preparation, program and attendance of the workshop.

Section 2 Preparation and Publicity

To attract a wide audience, the organizers undertook a number of publicity actions.

A *web page* was created early on. All the material regarding the workshop can be found at this webpage:

<http://dmod.eu/intersocial/index.html>

The webpage constitutes a point of reference for the event.

A link to this web page can also be found at the web page of the InterSocial project.

A *call for contributions* was issued (see Appendix I). A workshop committee was formed including members of the project and other experts on the topic. The members of the committee are listed below in alphabetical order:

- Nikolaos Avouris (Univ. of Patras, Greece) co-chair
- Sophia Daskalaki (Univ. of Patras, Greece)
- Ioannis Fudos (Univ. of Ioannina, Greece)
- Filippo Lanubile (Univ. of Bari, Italy) co-chair
- Fabio Montefrancesco (Euromed Cultural Heritage Agency, Italy)
- Nicole Novielli (Univ. of Bari, Italy)
- Evaggelia Pitoura (Univ. of Ioannina, Greece) co-chair
- Peter Triantafillou (Univ. of Patras, Greece)
- Panayiotis Tsaparas (Univ. of Ioannina, Greece)
- Ubaldo Villani Lubelli (Euromed Cultural Heritage Agency, Italy)

A *poster* for the event was also created (see Appendix II).

The poster was distributed in many places including the Chambers of Commerce of the Prefecture of Achaia and Ioannina where it was also posted.

The event was advertised in many places.

In particular, related announcements were posted many times in a variety of social web sites, including social networking sites (in particular, Facebook, linkedin and Twitter).

The event was also featured in Peloponnisos, one of the oldest and most well-known newspapers of Patras.

Other sites where the event appeared include among others: epixeiro.gr, medea.net (a media-based learning site), the IEEE Student Branch of Patras, DASTA TEI Patras, DASTA University of West Macedonia, the Scoop.it (educational site), ipaideia.gr (educational portal), thebest.gr (a large regional news portal), blogs.sch.gr, and many others. It was also posted at the general sites of the institutions involved (e.g., the site of

the University of Ioannina, University of Patras, University of Bari and Euro-Mediterranean Cultural Heritage Agency).

Section 3 Program and Participation

The event took place at Achaia Beach Hotel in Patras on Friday June 15, 2012. The program included a tutorial, an invited talk, 13 presentations covering various aspects of social networking organized in three sessions and a closing panel (see Appendix III).

The **tutorial** (delivered by E. Koletsou and D. Souravlias from the University of Ioannina) provided an overview of social networks. Then it provided an in-depth presentation of various tools for enhancing the presence of SMEs in social networks as well as for monitoring the activity in these networks. The presentation included several examples of using such tools.

The **invited talk** was delivered by Dr. Vazirgiannis is a Professor at Dept. Informatics, AUEB. Greece. He talked about their research are on Web Graph analysis and evolution monitoring and in particular on “Graph degeneracy for graph mining in social networks”.

The *first session* included five talks focusing mainly on **technological issues and concepts** underlying social networks. The first paper “*A Social Aggregator for SMEs*” by F. Calefato, F. Lanubile and N. Novielli (from the Univ. of Bari), presented by F. Calefato refer to an aggregator tool that aims to put together all the information about a SME, including both information that a SME is directly posting and what customers say about the SME on social networks. The second paper “*Social networks as a resource for policy formulation*” by V. Karkaletsis P. Karampiperis and S. Konstantopoulos (from NCSR Demokritos) presented by S. Konstantopoulos introduced a method for extracting arguments from user-generated content. The third paper “*InterSocialDB: An Infrastructure for Managing Social Data*” by D. Souravlias, G. Koloniari and E. Pitoura (from the Univ. of Ioannina) presented by D. Souravlias describes the basic components of an infrastructure for storing, managing and analyzing social data. The fourth paper “*Towards a Realistic Social Text StreamWorkbench*” by S. Kleisarchaki, D. Kotzinos, I. Tsamardinos and V. Christophides (from FORTH-ICS and TEI Serres) delivered by S. Kleisarchaki presented results on Twitter datasets comparing the effectiveness and efficiency of state-of-the-art clustering algorithms, such as k-means, hierarchical clustering and DBScan for textual streams. The fifth paper on “*Behavior of different network structures under node attacks: An application to political blogs*” by C. Katris and S. Daskalaki (from the Univ. of Patras) presented by C. Katris studied malicious attacks to networks by measuring specific properties of their node and edges.

The second session included four talks on **cultural and learning through social media**. The first paper on “*Educational Television 2.0 in DigitalMedia and Social Networks*” by B. Tsakarestou and S. Papadimitriou (from Panteion Univ. and the Educational Radio Television) delivered by S. Papadimitriou, presented the activities of the Greek Educational RadioTelevision (EduTV) towards addressing the penetration of new technologies in the contemporary social and educational environment, where schools are not just consuming content but also creating their own. The second paper was on “*Using*

Facebook as complementary teaching tool: A case study” was by A. Antoniou and G. Lepouras (from the Univ. of Peloponnese). The third paper “*Social Networks in Massively Multiplayer Online Games (MMOGs): the elusive boundary between the real and the virtual*” by I. Voulgari and V. Komis (from the Univ. of Patras) delivered by I. Voulgari identified issues and questions for further study relevant to the emergence and features of social networks in MMOGs based on the analysis of data from virtual ethnography (participant observation, interviews) and questionnaires from their research. The fourth paper “*Presence of cultural heritage institutions in online social media: the Greek case*” by E. Dimaraki, N. Yiannoutsou and N. Avouris (from the Univ. of Patras) delivered by E. Dimaraki attempted an examination of the still timid ventures of Greek cultural heritage institutions using readily available social media services.

The third session focused on **strategies and case studies for SMEs** and included four presentations. The first paper “*Social Networking Strategies and Persuasive Communication*” by U. Villani-Lubelli, (from Agenzia per il Patrimonio Culturale Euromediterraneo) delivered by U. Villani-Lubelli, discussed what it means for a company to have presence in a social network arguing that a communication strategy on must be shaped and modulated, according to what one wants to communicate, the communities with which one wants to interact and the environment in which it operates. The second paper “*The Approach of “Berris S.A.” to Turning Online Transactions into Social Experiences*” by T. Berri and E.Koletsou (from Berris S.A. and the Univ. of Ionnina) delivered by T. Berri presented the experience of Berri S.A. upon embarking on a social media marketing campaign aiming to increase the impact of the company impact in existing markets as well as to help in the development of emerging markets. The third paper “*Social Media marketing for SMEs*” by N. Achilleopoulos, V. Tsimplotestefanakis (from DIADIKASIA S.A.) delivered by N. Achilleopoulos offered advice to help SMEs to address the real and practical options available to businesses and entrepreneurs who want to adopt low-cost social marketing techniques to optimize the overall image and performance of their business. The fourth talk on “*SocialMedia Strategies for Tourism SMEs*” by T. Manolatos, V. Christidis (from Knowledge Broadband Services S.A.) presented tools available for social networks for in the tourist sector.

In the **closing panel**, there were various discussions regarding the economic issues as well as the social issues with regards of social networks and their future.

The proceedings of the workshop can be found in Appendix IV. They are also available for download from the webpage.

All presentations can be found in the webpage, as well.

The workshop was very well attended. They were about 45 registered participants (see Appendix V). They were also many walk-ins.

Section 4 Conclusions

The InterSocial Workshop on “Online Social Networks: Challenges and Perspectives” (IWOSN) was the first public activity of the InterSocial project. It took place on June 15, 2012 in Achaia Beach Hotel in Patras.

The event was well attended by a wide audience including researchers, business consultants and people from SMEs, showing the increased interest on the topic. The program of the event included a tutorial, an invited talk and various talks covering technological aspects, learning and social aspects as well as strategies and case studies from SMEs. Throughout the workshop, there were vivid discussions among the participants.

The next event is planned to take place in Lecce Italy in the summer of 2013.

APPENDIX I: Call for Contributions

CALL FOR CONTRIBUTIONS

1st Intersocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)

<http://www.dmod.eu/intersocial/>

Friday, June 15, 2012
Achaia Beach Hotel, Patras, Greece

Submission Deadline: May 15, 2012.
Notification: May 20, 2012.

Workshop Committee

Nikolaos Avouris (Univ. of Patras, Greece) *co-chair*

Fabio Calefato (Univ. of Bari, Italy)

Sophia Daskalaki (Univ. of Patras, Greece)

Ioannis Fudos (Univ. of Ioannina, Greece)

Filippo Lanubile (Univ. of Bari, Italy) *co-chair*

Fabio Montefrancesco (Euromed Cultural Heritage Agency, Italy)

Nicole Novielli (Univ. of Bari, Italy)

Evaggelia Pitoura (Univ. of Ioannina, Greece) *co-chair*

Peter Triantafillou (Univ. of Patras, Greece)

Panayiotis Tsaparas (Univ. of Ioannina, Greece)

Ubaldo Villani Lubelli (Euromed Cultural Heritage Agency, Italy)

The objective of the workshop is to bring together researchers and practitioners that work or are interested in the area of social networks to foster interactions, exchange of ideas and explore opportunities for cooperation.

The event will also include invited talks, panels and open discussions on research and technologies related to Social Networks.

There will be no registration fees for attending.

We invite submissions of extended paper abstracts (**up to 2 pages** including, title, authors, outline and key references) to be presented during the workshop.

The subject of the submissions may cover technical aspects of online social networks (such as the available tools for their analysis, related software platforms, etc) but also their societal and community impact.

Extended abstracts should be submitted electronically at:

<https://www.easychair.org/conferences/?conf=iwosn2012>

Accepted papers will appear online on the web page of the event and will be presented in the form of posters and/or short talks during the workshop.



Intersocial:
*Unleashing the Power of Social Networking
for Enhancing Regional SMEs*



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APPENDIX II: Poster



Intersocial

INTERREG IV

Foster interactions among researches and practioners in online social newtorks, explore oportunities of cooperation, focus on how SMEs can explore online social networks

Research paper presentations
Tutorials on the use of social networks

Panel with participation of SMEs from Italy and Greece



Intersocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)

Friday, June 15, 2012
Achaia Beach Hotel Patras, Greece

Organizers:

<http://dmod.eu/intersocial>



Distributed Data Management Laboratory



Co-funded by the European Union (ERDF) and by National Funds of Greece & Italy

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APPENDIX III: Program



Intersocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)

Friday, June 15, 2012

Achaia Beach Hotel Patras, Greece



Program

10:00-10:15 Welcome - Introduction to the workshop

10.15 - 11.00 **Social Media tutorial**

11.00 - 11.30 Coffee Break

11.30- 13.00 **Session 1 Concepts and technologies**

F. Calefato, F. Lanubile and N. Novielli A Social Aggregator for SMEs

V. Karkaletsis P. Karampiperis and S. Konstantopoulos Social networks as a resource for policy formulation

D. Souravlias, G. Koloniari and E. Pitoura The InterSocial Data Aggregator

S. Kleisarchaki, D. Kotzinos, I. Tsamardinos and V. Christophides Towards a Realistic Social Text Stream Workbench

C. Katris and S. Daskalaki Behavior of different network structures under node attacks: An application to political blogs

13.00-14.00 Lunch Break

14.00-15.00 **Session 2 Culture and Learning through Social Media**

B. Tsakarestou and S. Papadimitriou Educational Television 2.0 in Digital Media and Social Networks

A. Antoniou and G. Lepouras Using Facebook as complementary teaching tool: A case study

I. Voulgari and V. Komis Social Networks in Massively Multiplayer Online Games (MMOGs): the elusive boundary between the real and the virtual

E. Dimaraki, N. Yiannoutsou and N. Avouris Presence of cultural heritage institutions in online social media: the Greek case

15.00- 15.30 **Invited talk** M. Vazirgiannis Graph degeneracy for graph mining in social networks

15.30- 17.00 **Session 3 Strategies and case studies for SMEs**

U. Villani-Lubelli Social Networking: Strategies and Persuasive Communication

T. Berri and E. Koletsou The Approach of "Berris S.A." to Turning Online Transactions into Social Experiences

N. Achilleopoulos, V. Tsimplotefanakis Social Media marketing for SMEs

T. Manolatos, V. Christidis Social Media Strategies for Tourism SMEs

M. Vazirginannis, E. Pitoura, F. Lanubile, N. Avouris Closing panel - main conclusions / discussion

<http://dmod.eu/intersocial>

Organizers:



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APPENDIX IV: Proceedings



Intersocial



Intersocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)

Editors :

Nikolaos Avouris
Evaggelia Pitoura



Intersocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)

Friday, June 15, 2012 - Achaia Beach Hotel, Patras, Greece

Program

10:00-10:15 Welcome - Introduction to the workshop

10.15-11.00 Social Media tutorial

11.00-11.30 Coffee Break

11.30-13.00 Session 1: Concepts and technologies

- F. Calefato, F. Lanubile and N. Novielli*, A Social Aggregator for SMEs
V. Karkaletsis P. Karampiperis and S. Konstantopoulos, Social networks as a resource for policy formulation
D. Souravlias, G. Koloniari and E. Pitoura, InterSocialDB: An Infrastructure for Managing Social Data
S. Kleisarchaki, D. Kotzinos, I. Tsamardinos and V. Christophides, Towards a Realistic Social Text Stream Workbench
C. Katris and S. Daskalaki, Behavior of different network structures under node attacks: An application to political blogs

13.00-14.00 Lunch Break

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I. Voulgari and V. Komis Social Networks in Massively Multiplayer Online Games (MMOGs): the elusive boundary between the real and the virtual
E. Dimaraki, N. Yiannoutsou and N. Avouris, Presence of cultural heritage institutions in online social media: the Greek case

15.00-15.30 Invited talk

- M. Vazirgiannis*, Graph degeneracy for graph mining in social networks

15.30-17.00 Session 3: Strategies and case studies for SMEs

- U. Villani-Lubelli*, Social Networking: Strategies and Persuasive Communication
T. Berri and E. Koletsou, The Approach of "Berris S.A." to Turning Online Transactions into Social Experiences
N. Achilleopoulos, V. Tsimplostefanakis, Social Media marketing for SMEs
T. Manolatos, V. Christidis, Social Media Strategies for Tourism SMEs
M. Vazirginannis, E. Pitoura, N. Novielli, N. Avouris, Closing panel - main conclusions / discussion

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Introduction in Online Social Networks: Challenges and Perspectives

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In recent years, we have witnessed an unprecedented growth of social networking. The ever-increasing list of such networks include content sharing sites such as YouTube and Flickr, social networking platforms such as Facebook and Myspace, blogs, web forums, social bookmarking sites such as Delicious and massive online message exchange platforms such as Twitter.

The Inter-Social project, funded in the frame of the Territorial Cooperation Program aims at exploring social networking to enhance the competitiveness of small and medium enterprises (SMEs) in neighboring regions of western Greece and south Italy. Social networks offer new means and forums for world-wide product promotion as well as huge repositories of data for advanced market analysis and trend identification. In particular, the project aims at promoting advanced new technologies as related to the use of social networking to both (a) improve the web presence of SMEs and (b) use information provided by such sites for targeting advertisement and adaptive service provision.

The project will develop and deploy appropriate innovation devices (mechanisms, policies, software tools) to provide the following outputs: the deployment of social web locally adapted appropriately for specific SMEs, monitoring, archiving and analyzing social data, targeted online advertisement and product promotion through social networks and pilot use, move SMEs to highly efficient and effortless e-commerce. This 1st InterSocial workshop on online social networks is the first public activity of the project. The event has already drawn the attention of a wider audience in the regions concerned, beyond the project partners. The objective is to bring together researchers and practitioners of social media who discuss the challenges and the perspectives of these new media and in particular the opportunities that they offer to the SMEs of the deprived regions of the south of Europe, in particular in the current conditions of the economic crisis.

The program of the workshop includes talks both by industry and academia and brings together the perspective of tool and innovative algorithms developers, social science and communication theorists, examples of good practices in sectors like learning, games, cultural institutions, and retail and manufacturing. We hope this will be the first of a series of similar events to follow beyond the life of the project.

Graph degeneracy for graph mining in social networks

Michalis Vazirgiannis

Athens University of Economics and Business

(invited talk)

Abstract

Graphs constitute the dominant data structure in the WWW, and appear essentially in all forms of information. Examples are the web graph, social networks, protein interaction networks, terms dependency graphs etc. Important knowledge is hidden in the macroscopic topology and features of these graphs.

The dominant knowledge artifacts extracted from graphs are either individual node based scores (such as authority/hubness/centrality) or unsupervised grouping of nodes in to clusters or global statistics computations (such as degree distributions etc). What is missing is metrics, structures and measures that represent the deeper knowledge hidden in the macroscopic structure of potentially directed/weighted graphs.

We propose new metrics and evaluation schemes for the macroscopic structure of graphs capitalizing on the degeneracy concept, i.e. k-cores, towards identifying the most cohesive components of graphs – finding thus the most collaborative constituents. These metrics compute the most robust subgraphs representing dense and mutual connectivity in the case of directed and weighted graphs as well. Connectivity can be then interpreted in several ways: i.e. as collaboration in citation or social networking graphs, collective affinity in protein interaction graphs etc. We also use the best k-cores of graphs as seeds for optimizing the speed of spectral graph clustering. We conducted several experiments on real (DBLP, Wikipedia) and synthetic data sets. The results are interesting especially in the case in the DBLP citation graph.

We further extend k-core to deal with directed graphs, introducing the D-core concept, as means of evaluating a digraph's collaborative nature. Based on the D-core we devise a wealth of novel metrics used to evaluate the graphs collaboration features. We applied the above approaches on large real world graphs - Wikipedia and DBLP - and report interesting results.

Short CV



Dr. Vazirgiannis is a Professor at Dept. Informatics, AUEB. Greece. He holds a degree in Physics (1986), a MSc. in Robotics (1988), both from U. Athens, and a MSc. in Knowledge Based Systems from Heriot Watt University (in Edinburgh, UK). He acquired a Ph.D. degree in 1994 (Dept. of Informatics, U. Athens, Greece). Since then, he has conducted research in GMD-IPSI, Max Planck MPI (Germany), in INRIA/FUTURS (Paris). He has been a teaching in AUEB (Greece), Ecole Polytechnique, Telecom Paris (France) and in Deusto University (Spain).

His current research interests are on Web Graph analysis & evolution monitoring (page rank prediction, graph based aggregate metrics, graph clustering, model learning for web graph, algorithms for web advertising campaigns and community evaluation metrics. Also distributed machine learning algorithms, distributed dimensionality reduction, distributed resource management. His industrial experience and expertise lie in the areas of data mining and machine learning for large scale data repositories (i.e. the Web graph, social networks, medical data etc). He has supervised nine completed PhD theses http://www.db-net.aueb.gr/michalis/index.html#phds_completed.

He has contributed chapters in books and encyclopedias, published two books and more than a hundred twenty papers in international refereed journals and conferences. He is also co-author of two patents filed in the Greek patent office and one application filed in the European Patent office. He is actively involved in national and international research & development projects. He has received the ERCIM (2001) and the Marie Curie EU (2006) fellowships. Currently he holds a DIGITEO Chair research grant in France supported by Ecole Polytechnique, Telecom Paris & UVSQ. He participates in the editorial board of the Intelligent Data Analysis Journal and serves as guest editor for “Machine Learning” and “Data Mining & Knowledge Discovery” journals. He co-chaired the PC committee of ECML/PKDD 2011 conference, has served the Data Mining Track chair <http://www.icde2011.org/node/6> of the IEEE - ICDE 2011 conference and has participated as a conference committee member for more than forty international conferences, in the areas: Data Bases, Data Mining/Machine learning and the Web.

Prof. Vazirgiannis has been invited and participated in three /Google faculty EMEA summits /in Zurich, in 2008, 2011 and 2012.

A Social Aggregator for SMEs

Fabio Calefato, Filippo Lanubile, Nicole Novielli

Dipartimento di Informatica, Università degli Studi di Bari Aldo Moro, Bari, Italy

[calefato|lanubile|novielli]@di.uniba.it

Motivation

In recent years, the use of the web has widely affected interpersonal communication, thanks to the diffusion of social software that facilitates interaction and enhances our everyday life. Most people and companies have their digital identity spread on multiple social networks, such as Twitter, Facebook, LinkedIn, Foursquare, TripAdvisor, and so on. As an evidence of this, for example, the current number of monthly active users of Facebook is around 901 million of which 526 million are active on a daily basis [1].

Social software is now playing a fundamental role also at work. It can be used both as an instrument for knowledge sharing in a company intranet and as a powerful marketing channel for establishing a direct communication with the customers. As a consequence, several companies are now investing in social media for building their social digital brand and establishing trust-based relationship with their customers.

Assessing the adoption of social media into an enterprise requires that commercial goals are well defined. On the one hand, it becomes crucial to provide tools that make it possible to easily manage company profiles on the various existing social media platforms. On the other hand, it is fundamental to constantly monitor the activity on the company profile in terms of return of the investment [2]. This holds not only for large enterprises but also for small-medium enterprises (SME) that can benefit a lot by the buzz of social networks as a modern version of traditional word of mouth.

We propose the usage of a Social Aggregator that aims to put together all the information about a SME, including both information that a SME is directly posting and what customers say about the SME on social networks. Here, we briefly introduce the architecture and present some usage scenarios for SME.

Architecture

The Social Aggregator follows a client-server architecture. The server component, called Social Proxy Server, is an aggregator service that accesses the API of social networking services (SNS), using the HTTP/REST protocol. Being a proxy, its main duty is retrieving information from SNSs about registered users. We plan to support the most popular SNS, namely Facebook, Twitter, and FourSquare. For each service, a user will be able to customize what information the proxy is allowed to retrieve from the account (e.g., posts shared and profile picture, but not friends or followers).

The client component will communicate with the Social Proxy Server through the HTTP/REST protocol. Clients will be implemented for a number of platforms, in a device-independent fashion, wherever an HTML5 browser is available. In addition, to exploit the large diffusion of smartphones and tablets, platform-specific apps will be developed for Android, iOS, and Windows Phone. Clients will also be available as extensions of other applications, including content management systems (CMS), such as WordPress and Drupal, and desktop application, such as Visual Studio. In the latter case, we already have implemented a prototype of an extension of Visual Studio, called SocialTFS [3].

Usage scenarios

In the following, some possible scenarios are presented related to the Foo company, an imaginary Italian SME in the food category.

Twitter as a source. The company wants to monitor the trend of tweets that mention Foo. In order to do so, a filter is set to monitor the tweets that use the #Foo hashtag or directly mention the official twitter account @FooSME. The Social Aggregator service generates a widget that can be integrated within a Wordpress extension, the content management systems adopted by Foo. The widget displays a rotating list of the latest filtered tweets, draws a graph to visually monitor the "mention" tendency over Twitter, and ranks the most "addicted" commenters.

Facebook as a source. The Foo SME uses the Social Aggregator to generate polls for the Foo's Facebook page. A poll lists those meals that have been most cited by fans in their posts. Most voted meals will end up in composing the special weekend menu. Voters of the winning menu combination might get a special discount.

Social Network Analysis. As a combination of the two previous scenarios, Foo uses the Social Aggregator to monitor customer activities on social media. In particular, Foo may access to statistics on the most popular posts, topics and contents as a support for understanding the trend of the user behavior with respect to the Foo SME business.

Acknowledgments

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References

- [1] Facebook, Newsroom – Key Facts, <http://newsroom.fb.com/> last accessed on 14/05/2012
- [2] Olivier Blanchard, Social Media ROI – Managing and Measuring Social Media Efforts in Your Organization. Que Publishing, 2011
- [3] SocialTFS, <http://socialtfs.codeplex.com/> last accessed on 14/05/2012

Social networks as a resource for policy formulation

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Abstract

In this talk we will present a method for extracting arguments from user-generated content. Statistical analysis and visualization of the extracted data establishes an implicit collaboration between policy-makers and citizens, supporting a policy-making process driven by the needs and opinions of the persons affected by the policies being made. Beyond our particular use case, the tools and methods developed can be used in a variety of scenarios, as diverse as citizen journalism or product development.

1. Introduction

Social networks have changed the way we interact, share ideas, and collaborate by creating networks of collaboration and sharing that do not rely on any physical or organizational proximity. Recent research into discovering implicit links in the network and clustering users into communities of common interests pushes this further, facilitating the discovery of interesting content and potential collaborators beyond the reach of our explicit social network.

Such methods typically rely on the semantic similarity between user-generated content, which requires that all parties involved discourse on the same topic. In this talk we will present the FP7-ICT NOMAD project, which pushes the discovery of implicit networks one step further: NOMAD mines user-generated content for structural and semantic similarities in the arguments made to support or oppose opinions and extracts patterns and statistics about these arguments.

More specifically, NOMAD develops a complete toolset for the discovery, acquisition, analysis, and visualisation of arguments made in support or opposition of policies. As a rough example, consider how drafting environmental policy can benefit from access to statistics about how people felt about industrial growth at the expense of environmental concerns when other policy in completely different domains was on public consultation: many of the arguments about the relative merits of industrial growth and environmental concerns can retain their structure and be thematically transferred to the new domain, helping draft a policy that best addresses people's concerns.

Although the NOMAD use case focuses on the involvement of the citizen in the policy-making process, the tools and methods can be used in a variety of scenarios, as diverse as citizen journalism and product development. The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement no 288513. For more details, please see the NOMAD project's website, <http://www.nomad-project.eu>

2. Statements and supporting arguments

The project develops an ontological conceptualization of statements made over a domain, of arguments supporting or countering statements, and of the linguistic realizations of such arguments. We build upon established ontological foundations such as DOLCE (Gangemi et al., 2003) and schemata for expressing linguistic data about abstract concepts (Konstantopoulos et al., 2011). Since NOMAD focuses on policy making, statements in NOMAD are policies that relate stakeholders to the practices that constitute their plans, rights, and obligations.

Beyond our specific use case, we generically model statements as a network of relations between objects (mostly agentive) and the concepts that define their actions and plans. In product development, for example, statements would relate consumer types to features and qualities sought in a product; in brand monitoring they would relate products with qualities attributed to them by consumers, etc. Our conceptualization further foresees that arguments are used to support or oppose statements. Arguments are classified by a typology, such as arguing by presenting examples and counter-examples, referring to normative or authoritative texts, etc. Although our argument ontology is consistent with existing conceptualizations of arguments in philosophy and cognitive science, our focus is different and different distinctions drive the definition of our argument classes. Specifically, we are not as much interested in the quality, logical integrity, or persuasiveness of an argument, as we are in identifying patterns and repetitions in the concrete linguistic realization of different argument types. Such patterns support ontology-based information extraction (Karkaletsis et al., 2011) in identifying arguments in text and extracting the concepts and individuals that are used and mentioned in the argument.

3. Conclusion

Recent research has led to significant advances in linking linguistic resources with abstract domain conceptualizations and in exploiting these links in ontology-driven information extraction. NOMAD builds upon these advances to index not only opinions and their polarity from forums, blogs and micro-blogs, but also extract the arguments made to support such opinions. The ultimate purpose is to be able to re-use and re-combine elementary arguments in new chains of argumentation, predicting the opinion of the people on statements that have not been made public and have not been explicitly commented. Besides the obvious societal impact in our policy-making use case, NOMAD technologies break new ground in the discovery of implicit relations and communities in social networks, in targeted advertisement and adaptive service provision, as well as a variety of technologies driven by social network analysis.

References

- A. Gangemi, R. Navigli, et al. *OntoWordNet: Extension and axiomatization of conceptual relations in WordNet*. In *Proc. On The Move to Meaningful Internet Systems*, LNCS 2888. Springer, 2003.
- V. Karkaletsis, P. Fragkou, et al. *Ontology-based information extraction from text*. In *Knowledge- Driven Multimedia Information Extraction and Ontology Evolution*, LNCS 6050. Springer, 2011.
- S. Konstantopoulos, V. Karkaletsis, D. Vogiatzis, and D. Bilidas. *Authoring semantic and linguistic knowledge for the dynamic generation of personalized descriptions*. In *Language Technology for Cultural Heritage*, Ch. 5. *Theory and Applications of Natural Language Processing*, Springer, 2011.

InterSocialDB: An Infrastructure for Managing Social Data

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Abstract

Today, online social networks generate content of unprecedented scale. In this short paper, we describe the basic components of an infrastructure for storing, managing and analyzing social data.

1. Introduction

The rapid proliferation of online social networks (OSNs), such as Facebook, Twitter and LinkedIn, has resulted in creating an influx of timely data on any topic of interest. Most popular OSNs offer APIs that allow applications to access their underlying social graph and user-generated content. The analysis of social data attained from such OSNs has applications in many areas including mobile services, retail, advertisement, manufacturing, and social and life sciences.

Unlike traditional data, content generated by social networks is inherently dynamic. After the initial posting of an item, users continue to generate new related content by for example posting comments, ratings or replies. As time passes, the perceived popularity, interpretation and quality of published data may change significantly. Another major difference with traditional data is quality. In traditional database systems, although there may be some inconsistencies (such as those caused by typing or other errors), the typical range of quality is substantially narrower than that in social media where the quality of content varies from very high to very low, including postings that constitute spam or advertisements.

Social data have rich, highly interrelated content. In addition to document content and link structure, a wide variety of metadata is available regarding authorship, time, preferences, and interactions with other content and users. Natively, social data is not in any unified structured format; for example, tweets are pieces of text augmented with links, hashtags and other metadata, Facebook pages contain a variety of different types of content, including images and videos, while in all cases, along with data there is social information (such as friends, followers, interest groups) and popularity related information (such as likes or mentions).

Collecting, modeling, storing and analyzing social data poses many challenges [1]. In this paper, we outline an infrastructure for a social data management service for providing storage and processing functionality to applications that would like to analyze social data.

2. The InterSocialDB Framework

Our goal is to develop an infrastructure for managing social data. The components of this infrastructure can be distinguished into (Fig. 1):

- (a) a *data acquisition component* that collects (either continuously or on demand), pre-processes, models, aggregates and stores data generated from online social networks, and
- (b) a *data processing component* that performs various analytical tasks on social data and presents the results of this analysis to the users.

The data acquisition component can be partitioned into three phases, namely collection pre-processing and integration.

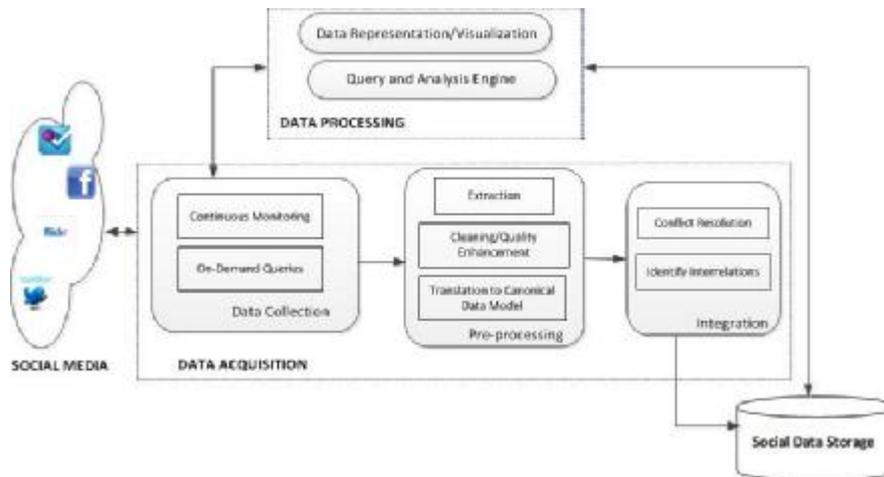


Figure 1: The InterSocialDB Architecture

During data collection, data are gathered from social networking sites. Such collection may be through ad-hoc, one-time queries or through continuous monitoring queries. Besides specifying which data to collect, it is central to determine appropriate metadata and provenance information for annotating the collected data. Provenance is a general term referring to recording and tracing the origins and alterations of data stored in a database [2]. Take for example a simple query about the appearance of term “Patras”. Annotations may include metadata about the appearance of the term, such as information about the related social media post and its creator as well as provenance information including who, when and where posed the query about “Patras” and when and how the collection of data was performed. After the collection of raw data and its annotations, extra processing is required for extracting related information and data cleaning. Since the original data do not follow any specific format, we need to translate data to a common data model. There are many alternatives for storing social data [3]. Candidates include (a) traditional relational database systems, such as MySQL, (b) key-value stores (for example, HBase), (c) document databases (such as CouchDB) and (d) native graph databases (such as Neo4j). As a final step, before storing the collected data, some integration-related activities are applicable. Since we will support data generated from more than one social networking site, for example, we need to identify references to the same object.

The data processing part refers to the analysis of the collected data so that important information is extracted. The analysis may use both stored data and live streaming data. Data presentation is also central for identifying potential interesting events.

3. Conclusions

In this short report, we argued that besides the analysis of social data, a variety of data management tasks, including modeling, integration and storage are central. We are currently in the process of implementing the related infrastructure.

References

- [1] A. Y. Halevy, Towards an ecosystem of structured data on the web, *EDBT* 2012
- [2] Y. Simmhan, B. Plale and D. Gannon, A survey of data provenance in e-science, *SIGMOD Record* 34(3), 2005
- [3] N. Ruffin, H. Burkhart, S. Rizzotti. Social-Data Storage-Systems, *DBSocial* 2011

Towards a Realistic Social Text Stream Workbench

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We are witnessing an unprecedented growth of interest in social media¹ enabling people to achieve a near real-time information awareness. Several online networking sites (e.g. Facebook), micro-blogging applications (e.g. Twitter) and Social news (e.g. Digg) produce on a daily basis vast amounts of user-generated content (i.e. textual posts) related to a wide variety of real-world news (personal, political, commercial etc.). The automated analysis of such social text streams has already created scientific and business value.

Several methods for analyzing social text streams have been proposed during the last years. One seeks to identify emerging trends [8, 9, 3, 7], that is topic areas for which there is a bursty interest among users. Emerging trends are defined as sets of words or phrases and are typically identified by analysis of the statistics of words co-occurrence. A second method seeks to identify and monitor topics in social streams [?, 4, 11, 10]. In these works, topics are defined as clusters of similar textual posts. Other related work focuses on identifying real-world events along with their date and time, participants, and location [5, 2, 1]. Although most of these works are experimentally validated, there is still no systematic workbench which takes into account the peculiarities of social streams exhibited in reality enabling us to benchmark different kinds of analysis algorithms in an unbiased way. For example, it is known that Twitter posts are:

Short & low quality. Tweets are, by design, short texts of up to 140 characters with lot of abbreviations and social media slang. Moreover, they often exhibit low quality (syntactical errors, ungrammatical sentences, spelling mistakes) and contain spam posts (spamming trending topics to grab attention or repeatedly posting duplicate updates). Those characteristics have a great impact on the size of the extracted vocabulary and its weighted representation.

Heterogeneous & Noisy. Twitter users post messages of different type and scale, ranging from personal stories with no interest to a broad audience until breaking news of high popularity. This heterogeneity affects the number and the utility of recognized clusters.

Highly Evolving. Tweets are characterized by a non-stationary data distribution, as new points arrive over time in a high rate. A cluster's shape, volume and density may be changing over time. This behaviour affects the memory/ performance requirements of the various clustering algorithms and highlights that the number of clusters and their active period can not be known a-priori.

¹ en.wikipedia.org/wiki/Social media

In an effort to achieve a better understanding and insight of the social stream data and their effect on the analysis tools we design and subsequently use three experiments based on data sampled from an initial corpus of 9,062,914 English tweets, collected under Twitter Filter API ², using the tag 'flotilla, Gadafi, Libya, Tripoli, championsleague'. Out of this collection we have extracted three sampled datasets, using the Alias method [6], exhibiting different evolving behaviours (in terms of arrival rate and volume) as well as topic heterogeneity.

The first dataset was designed to obey the daily tweets frequency occurrence distribution of the initial corpus. Each topic inside the sample appears with much different arrival rate and volume than the others. The second was sampled around the burst period of each tag maintaining its hourly distribution, while the third contains one more tag 'Japan' to simulate the heterogeneity of time overlapping topics following the initial daily distribution. We consider all tweets sharing a tag as belonging to the same cluster. Subsequently, we filter out by manual inspection the tweets that do not belong in the topic of the tag, thus creating three gold-standard datasets.

Based on the above Twitter datasets, we are interested in comparing the effectiveness and efficiency of state-of-the-art clustering algorithms, such as k-means, hierarchical clustering and DBScan for textual streams. First, we estimate the percentage of false positives when using the tags. Second, we compute the evolution over time of the cluster's shape, size, density and centroid's trajectory. Is there of a distribution drift or new sub-topics appearing with the same tag that requires special handling? To this end, we employ several visualization aids, such as Principal Component Analysis, proximity matrices, as well as graphs depicting the correlation between tweet distances and temporal difference of their timestamps. Third, we study the effect of dimensionality reduction of the features (words/terms) considered. Specifically, we explore the trade-off between the number of features employed in the distance calculations that distinguish the clusters the best. Finally, we evaluate the clustering quality of prototypical algorithms on the problem to show the need for the design of specialized clustering algorithms for this problem.

References

- [1] Becker, H. and Naaman, M. and Gravano, L. Beyond trending topics: Real-world event identification on Twitter. 5th International AAAI Conference on Weblogs and Social Media, 2011.
- [2] Becker, Hila and Naaman, Mor and Gravano, Luis. Learning similarity metrics for event identification in social media. Proc. of the 3rd WSDM, pages 291--300, NY, USA, 2010. ACM.
- [3] Cataldi, Mario and Di Caro, Luigi and Schifanella, Claudio. Emerging topic detection on Twitter based on temporal and social terms evaluation. Proc. of the 10th MDMKDD, pages 4:1--4:10, NY, USA, 2010. ACM.
- [4] Charu C. Aggarwal, Karthik Subbian. Event Detection in Social Streams. Proc. of SDM, 2012.
- [5] Chen, Ling and Roy, Abhishek. Event detection from flickr data through wavelet-based spatial analysis. Proc. of the 18th ACM CIKM, pages 523--532, NY, USA, 2009. ACM.
- [6] Devroye, Luc. Sample-based non-uniform random variate generation. Proc. of the 18th WSC, pages 260--265, NY, USA, 1986. ACM.

² <https://dev.twitter.com/docs/streaming-api/methods>

- [7] Qi He and Kuiyu Chang and Ee-peng Lim and Jun Zhang. Bursty Feature Representation for Clustering Text Streams.
- [8] Mathioudakis, Michael and Koudas, Nick. TwitterMonitor: trend detection over the twitter stream. Proc. SIGMOD, pp 1155--1158, NY, USA, 2010. ACM.
- [9] Sakaki, Takeshi and Okazaki, Makoto and Matsuo, Yutaka. Earthquake shakes Twitter users: real-time event detection by social sensors. Proc. of the 19th WWW, pages 851--860, NY, USA, 2010. ACM.
- [10] Hassan Sayyadi and Matthew Hurst and Alexey Maykov. Event detection and tracking in social streams. Proc. of the ICWSM. AAI, 2009.
- [11] Zhao, Qiankun and Mitra, Prasenjit and Chen, Bi. Temporal and information flow based event detection from social text streams. Proc. of the 22nd AAI - Volume 2, pages 1501--1506, 2007. AAI Press.

Behaviour of different network structures under node attacks: An application to political blogs

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Extended Abstract

The behavior and resilience of networks to node attacks depends heavily on their topology, structure and several statistical properties arising from them. In this paper we study four well established types of networks: regular, random, small world and scale-free networks. For each one of them we study those measurements and statistical parameters that characterize and differentiate them. More specifically, we study the properties “degree”, “closeness centrality” and “betweenness centrality” for the nodes and edges of the network, the “clustering coefficient” from the local network measures, and “entropy”, “link efficiency” and “average clustering coefficient” from the global network measures.

With the help of statistical inference we attempt to capture the statistical distributions of certain quantities arising in the networks under investigation. As we show the distributions of node degree and node betweenness are two of those properties that differentiate and as a result characterize the type and underlying structure of the network. Defining the distribution eventually can play an important role in understanding phenomena such as virus spreading in the Internet, rumor propagation, spreading of ideas in social networks, etc.

In order to study malicious attacks to networks in general or social networks in particular we considered four simulated networks, one for each one of the above types. We considered two models of node attacking, random or targeted to specific nodes. For each network type we study the expected consequences from the attack and introduce certain metrics which may potentially measure and quantify the harm.

Lastly, we consider the data provided in the website: on political blogs. Using the previously described methodology, we first classify the network according to its statistical measures and expected type. Then we introduce hypothetical random and targeted attacks to its nodes, this way creating the equivalent of censorship acts. We conclude by summarizing our findings on the stability and potential for resilience of networks based on their structure and statistical properties.

This work was performed with the help of certain software tools. The original networks were created by igraph, a package running in R, while NodeXL and Gephi were used for visualization and calculation of metrics. Finally, STATA and Minitab are the statistical packages used for the statistical analysis.

References

[1] Barabasi A.L., (2002), *Linked: The New Science of Networks*, Perseus Publishing: Cambridge, Massachusetts

- [2] Börner K., Sanyal S., Vespighnani A., preprint (2007), Network Science, Medford, NJ: Information Today, Inc./American Society for Information Science and Technology, Volume 41, chapter 12, pp. 537-607
- [3] Lewis T., (2009), Network Science: Theory and Practice, John Wiley & Sons, Inc., Hoboken, New Jersey
- [5] R. Albert, H. Jeong, A.-L. Barabasi, (2000), Error and Attack Tolerance in Complex Networks, Nature 406, pp. 378-482
- [6] Watts, D.J., Strogatz, S.H. (1998), "Collective dynamics of 'small-world' networks.", Nature 393 (6684), pp.409–10.
- [7] Albert-László Barabási & Réka Albert (1999), "Emergence of scaling in random networks", Science 286 (5439), pp.509–512
- [8] L. A. Adamic and N. Glance, "The political blogosphere and the 2004 US Election", in Proceedings of the WWW-2005 Workshop on the Weblogging Ecosystem (2005).

Educational Television 2.0 in Digital Media and Social Networks

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The development and penetration of new technologies in the contemporary social and educational environment, where schools are not just consuming content but also creating their own, has inspired and motivated Greek Educational RadioTelevision (*EduTV*) to get out, meet the Digital Generation in its own space and become part of its community.



The vision of *EduTV* is to empower students as creators, researchers and global citizens reconnecting with a young audience and moving on from traditional media in the digital era, where “*We, (are) the Media*”. An important vehicle in this effort is the continually upgraded website of the organisation at <http://www.edutv.gr/>, launched in 2009. High-quality videos relevant to class curricula are available for *streaming* or *on demand delivery*, as digital archives. Since September 2010, *EduTV* has dynamically entered the digital era and connected with communities of young people. Recognising that knowledge is a process in constant evolution, it expects to be both part of and a catalyst in this process. The second generation of *EduTV* is a multimedia platform connected to social networks which offers students and teachers the environment and the tools to design and create their own *multimedia projects*. Taking an active role in connecting school communities and contributing to the development of audiovisual culture, it motivates and enables students to create *User Generated Video/Content (UGC)* reusing and remixing the available videos and newly documented digital content.



In this context, *EduTV2.0* has developed an open collaborative learning environment of youth creation at <http://www.i-create.gr/>, supporting experimentation, creativity, exchange, production of ideas and promoting school communities’ projects. Videos, games, blogs, *Web2.0* applications are developed and submitted through video contests and social responsibility and awareness-raising campaigns in partnership with schools, universities and other organisations. Students actively participate as digital media storytellers, content curators, not consumers but rather *pro-sumers* (producers and consumers), becoming active and responsible citizens. Aimed at motivating, activating and engaging students in collaborative projects and fostering an alternative learning philosophy, *EduTV2.0* has developed the five following projects in *i-create*.

The contest “[Al.Papadiamantis, N.Gatsos, Str.Tsirakas and Od.Elytis: 100 years later](#)” was dedicated to the re-discovery of four great Greek authors through their writing.

Students wrote their own stories supported by teachers from their schools and also cooperated with other schools. A total of 190 schools participated and 90 videos, 27 blogs and 73 posters were uploaded, enriching everyone's knowledge with UGC. During this project, an active community was created with dialogue, sharing (*crowd sourcing*) and rating, as well as polls happened around content (*social filtering*).

The contest "[School Cooking-Mediterranean Diet](#)" was created due to the inclusion of the Mediterranean Diet in the UNESCO Cultural Heritage of Humanity list which focussed on the changes in traditional diet, as well as the position of Greece in Europe regarding childhood obesity. It is a place of reference, dialogue, creativity and knowledge about nutrition and its relationship in health, environment, history, culture and economy. 376 schools participated from Greece, Cyprus and Greek Schools in Europe.

The interactive game "[A Letter-A Story](#)" is an innovative Web-based Learning Environment aiming to teach preschool and primary school pupils the Greek alphabet and language through entertainment, play and active participation. It reinforces preschool learning skills which lead to progressive written literacy in the first grade. Piloting the game in 12 schools has reported excellent results and positive responses from pupils, teachers and parents.

[Score against Violence. It's a Game, not war](#) is the slogan of a social responsibility campaign against violence which works across different media. This micro-site includes an animated cartoon series with five spots and an interactive animated cartoon with "hot areas", hyperlinked to new pages with rich and vivid digital content; videos, photos, presentations in *Prezi* and *Slideshare* format, all of which provide valuable information aimed at raising awareness on the topic of violence. Students participating in the campaign created their own slogans in radio spots, podcasts, video-animations and posters using figures from the animated cartoon series.

The science communication video contest [School-Lab](#) was co-organised by the *British Council* and *i-create* through the programme "*New Generation in action*" of the European Commission. The contest helped students better understand some of the exciting challenges faced by scientists and researchers, as well as gain self-confidence and presentation skills to better get across their ideas. A group of talented young scientists, specialists in science communication (*mentors*), motivated and supported students are developing their skills and their project, familiarising themselves at the same time with the research process.

EduTV2.0 as a part of the Social Media ecosystem curates and aggregates educational and UGC in [YouTube](#), [Facebook](#), [Twitter](#), [Blog](#), [scoop.it](#), [Vimeo](#) and [Linked-In](#). The [Educational TV Blog](#), kicked off in October 2010, is part of the educational blogs group of [Greek School Network](#), having more than 118,211 total visitors, 53,525 total unique visitors in May 2012 and about 400 unique visitors per day. More than 25 educators have created 180 posts presenting and sharing their work or interesting topics regarding media and learning, as well as *Web2.0* applications. The twitter account *EduTV_Greece* enjoys 994 followers, 296 following, 968 tweets, 4 lists. The YouTube Channel *Educational Television-Greece* kicked off in November 2010, has 400,816 views, 289 subscribers styled educators with average age 34 years old. The channel contains selected videos from *EduTV* archives, interviews, project presentations at conferences and workshops as internal digital productions. Furthermore selected video clips have been uploaded following specific pedagogical



criteria from the European project [EduTubePlus](#) accompanied with relevant metadata. 2180 people have said that they “like” the facebook page *Educational Radiotelevision & Digital Media* (1671 fb likes), combined with two secondary pages concerning two relevant contests on i-create: “[100 years later](#)” (250 fb likes) and “[School Lab](#)” (259 fb likes).

Adopting an extrovert and open communication approach, *EduTV 2.0* not only presents its projects but furthermore promotes important, creative, innovative actions and projects, as well as comments and discusses on social networks. Therefore, *EduTV 2.0* raise the interpretive context trying to provide added value to the community. The first assessment of creation and experimentation of the *i-create Project* is positive, regarding inspiration and motivation students creativity, participation, students and schools collaboration, as well as the emergence of “*community wisdom*” (*crowd-sourcing*). The contest projects had great acceptance in school communities and gained students and teachers introducing innovations in Greek education.

EduTV participates in [MEDEAnet project](#) aimed to promote media-based learning to organisations and practitioners through local training and networking events, online resources and knowledge sharing. MEDEAnet will also exploit best practices of the annual competition [MEDEA Awards](#) and extend its existing informal network. *EduTV* will extend the MEDEA network to Greece, providing opportunities and networking activities for practitioners and policy makers to participate in the [Media & Learning Community](#). Trainers, teachers and academics who have not been engaged in using media to support their learning activities up to now are motivated to really engage with media as part of their daily work.

EduTV will also contribute to the annual report which will provide information about the extent to which media literacy is incorporated into curriculum design for compulsory level education as well as the degree to which training in the production of education media is available to trainee teachers in Greece, the degree to which adult educators have access to this type of training and the general availability of media-based learning resources in Greece for use by all education and training sectors. *EduTV* will present their work at the annual [Media & Learning Conference](#) and will also organise workshops on related topics in Greece during the lifetime of MEDEAnet. Find out the visual presentation [EduTV 2.0](#) in *slideshare* platform .

Using Facebook as complementary teaching tool: A case study

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Abstract

The popularity of social networks and particularly of Facebook among university students implies a clear educational potential. In a preliminary study, it was found that most of the 1st year students at the Department of Computer Science and Technology (University of Peloponnese) use Facebook daily and many hours per day. It was decided that Facebook would be used as a complementary teaching tool for the course of “Research Methodology in English” (1st year course). In total, 66 students attended the classes, all between 18-19 years of age. The course instructor created a new profile on Facebook (not a specific group, but seen as a physical person) and asked students to send friendship requests. The vast majority of students included the instructor in their friends’ lists (55 friend requests). The students were also aware that this was a research process and their participation is valuable.

From the first day of use, the students were given a usage diary and were asked to fill in at least 5 logs each, in which they should write down the date of use, the duration, the medium (PC, mobile phone, etc.), the purpose of visit, difficulties they faced, any other comments. The diaries were collected at the end of the term.

In addition, students were asked to answer a small questionnaire at the beginning of the term, to identify their cognitive style, since one of the main research hypotheses was that social media might be more beneficial for certain cognitive styles, rather than others (i.e. extroverts vs. introverts). The students’ cognitive styles would be compared at the end of the term with their overall course mark (to see whether certain cognitive styles managed better) and their answers on a final questionnaire, about the use of Facebook in class at the end of the term. This final questionnaire used open-ended questions to measure satisfaction levels, perception of learning benefits or obstacles, and to ask for their comments on different issues (e.g. on privacy issues, on the access it provided to the instructor and the course material, on the possibility to make new friends and exchange information beyond the course work, etc.).

Furthermore, the instructor kept a personal diary of use, with her actions on Facebook and students’ reactions (e.g. likes, posts, comments, etc.). The instructor’s posts were divided in the following categories:

- Procedural information about the course (e.g. “ marks now available on eclass”)
- Reminders (e.g. “please, bring your course books”)
- Social postings (e.g. “birthday wishes”)
- General interest information (e.g. “art installations, new paths in computer science”)

- Evaluations and feedback aspects (e.g. “questions like *what do you expect from this course?*” or “mid-term course evaluation”)
- Other notifications (e.g. information about university events, like open seminars, etc.)

Students’ activities were organized in the following categories:

- Asking questions
- Asking for clarifications
- Replying to instructor’s requests
- Replying to instructor’s comments
- Sending course work to other students and exchange course information and material
- Handing in course work
- Posting personal thoughts on the instructor’s wall (e.g. political videos, song videos, etc.)

In general, the use of Facebook was found to be valuable teaching tool for the instructor, since it allowed the identification of students’ interests and trends. The observations of these interests enriched the teaching material, since certain tasks included followed those trends. Moreover, students seemed to feel comfortable (it was a gradual process) with the digital presence of a member of staff and according to their feedback, it made them feel closer to the University and made student-instructor communication easier. This was certainly beneficial for the course, since the instructor had clear student feedback after every lecture. Most students found it a very helpful learning tool and asked for its full use in other courses, too. Although, the data have not been processed statistically, yet, it seems that the use of Facebook helped introvert students socialize with other students and to communicate better. It also seemed to help shy students to interact with the instructor and according to certain comments it was easier for them than face to face interaction. However, a few students had some privacy concerns, as well. In conclusion, using social networks with University students seems to have more advantages than disadvantages and can be a part of a learning process, supporting collaboration and communication of students and staff. Future work in the field is already planned, to explore the educational potential of Facebook further during the next academic year.

References

- Caroline Haythornthwaite. 2011. Learning networks, crowds and communities. In *Proceedings of the 1st Int. Conf on Learning Analytics and Knowledge (LAK '11)*. ACM, New York, NY, 18-22.
- Ilaria Liccardi, Asma Ounnas, Reena Pau, Elizabeth Massey, Päivi Kinnunen, Sarah Lewthwaite, Marie-Anne Midy, and Chandan Sarkar. 2007. The role of social networks in students' learning experiences. *SIGCSE Bull.* 39, 4 (December 2007), 224-237.
- Rocael Hernández, Christian Guetl, and Hector R. Amado-Salvatierra. 2011. Facebook for e-moderation: a Latin-American experience. In *Proceedings of the 11th International Conference on Knowledge Management and Knowledge Technologies (i-KNOW '11)*, Stefanie Lindstaedt and Michael Granitzer (Eds.). ACM, New York, NY, USA, , Article 37 , 4 pages.
- Mary Beth Rosson, John M. Carroll, Dejin Zhao, and Timothy Paone. 2009. wConnect: a facebook-based developmental learning community to support women in information technology. In *Proceedings of the fourth international conference on Communities and technologies (C&T '09)*. ACM, New York, NY, USA, 125-134.
- Elisabeth Sylvan. 2006. Who knows whom in a virtual learning network?: applying social network analysis to communities of learners at the computer clubhouse. In *Proceedings of the 7th international conference on Learning sciences (ICLS '06)*. International Society of the Learning Sciences 758-764.

Social Networks in Massively Multiplayer Online Games (MMOGs): the elusive boundary between the real and the virtual

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The Internet constitutes “the world’s largest social science observatory” (Contractor, 2009) while the MMOGs have been described as the “Petri dishes for social science” (Castronova, 2006), as “designed civilisations”, “digital nations” and “third places” (Squire, 2006; Steinkuehler, 2005; 2004). Beyond the designed environment and the gaming aspect, MMOGs constitute virtual spaces rich in social interactions. Players form groups and develop networks of people not only for attaining the goals of the game, but also for socially enhancing their in-game experience (Nardi & Harris, 2006). Our aim is to address the social aspect of MMOGs and discuss the formation and implications of social networks. Based on the analysis of data from virtual ethnography (participant observation, interviews) and questionnaires from our research, we identify issues and questions for further study relevant to the emergence and features of social networks in MMOGs. The main issues that emerged, in relation to the social networks in MMOGs, seem to be the following:

- § **MMOGs and Social Networking Platforms:** Players develop both gaming and social networks in the virtual environment. Over the past few years there has been a number of attempts to link MMOGs to social networking sites, either through general social networks (e.g. *Facebook*), or specialised networks for MMOG players (e.g. *Uberchar*, *Koinup*) where players can connect to other players, discuss about the game, publicise their in-game achievements, and share in-game content. A large number of online, active communities have, furthermore, emerged through fora and websites specifically orientated towards discussion about the game and exchange of player-developed game-related content.
- § **In-Game Groups as Social Networks:** In-game groups of players (e.g. the guilds in the *World of Warcraft*) constitute the main research units for the investigation of player interactions, practices and the group dynamics. The environment provides limited tools for the formation and management of a group (Ducheneaut, Moore & Nickell, 2007). Issues such as the structure, the orientation, the goal of the group, the rules for the acceptance or dismissal of members, and player churn among different groups depend, at a large extent, on the decisions, the preferences, the links, the social ties, and the relations among the players. The social aspect seems to play a critical role in the formation and the effectiveness of an in-game group.

- § **Real Life and its Implications:** Design decisions, environment affordances, and the architecture of the virtual environment may support or deter interactions and the formation of social networks among the players (Koster, 2009; Schell, 2008; Yee, 2008, 2009). The emergence of such networks, although taking place within a virtual, fantasy world, seems to also be linked to the real life personality, motivations, and attitudes of players.
- § **The Convergence of the Real and the Virtual:** Furthermore, the virtual life seems to diffuse into the real life and vice-versa. Players connect in the game with their real-life friends or colleagues, or reversely in-game friends meet and further interact and develop relations in real life. In this way real-life social networks are transferred in the game, and in-game, online, social networks acquire a real-life dimension.

The main conclusion of this discussion is that the development of the social networks in MMOGs present certain similarities to social networks developed over social networking platforms, and also specific differences reflecting the gaming aspect of the environment: networks are developed based on the virtual presence and in-game achievement, as well as on the personality, the behaviour, and the quality of the communication among people. Furthermore, the wide range of player real-life profiles and backgrounds interacting in the game, combined with the anonymity and the limited identity clues, concerning for example age, profession, gender, nationality, or educational background, supports the expansion of the social capital of the individual, as it provides the opportunity to interact with people with whom it would be difficult to interact in real-life or conventional social networking platforms.

The questions for further research arising from this study are relevant to the implications of real-life characteristics, and the fantasy and virtual aspect of the environment, for the formation, the features, and the dynamics of the social ties and networks in MMOGs. While in social networking platforms such as *Facebook*, the development of the network relies on the real-life identity of the people, in MMOGs real-life clues are limited and the fantasy aspect, the virtual character (avatar), game-related practices, and in-game behaviour seem to play a more predominant role.

References

- Castronova, E. (2006). On the Research Value of Large Games: Natural Experiments in Norrath and Camelot. *Games and Culture*, 1(2), 163-186. doi:10.1177/1555412006286686
- Contractor, N. (2009). The Emergence of Multidimensional Networks. *Journal of Computer-Mediated Communication*, 14(3), 743-747. doi:10.1111/j.1083-6101.2009.01465.x
- Koster, R. (2009). Ways to make your virtual space more social. *Raph Koster's Website*. Retrieved March 2010, from <http://www.raphkoster.com/2009/01/28/ways-to-make-your-virtual-space-more-social/#more-2486>
- Nardi, B., & Harris, J. (2006). Strangers and friends: collaborative play in world of warcraft. *Proceedings of the 2006 20th anniversary conference on Computer supported cooperative work - CSCW '06* (p. 149). New York, New York, USA: ACM Press. doi:10.1145/1180875.1180898

- Schell, J. (2008). *The Art of Game Design: A book of lenses*. Morgan Kaufmann, 1 edition
- Squire, K. (2006). From Content to Context: Videogames as Designed Experience. *Educational Researcher*, 35(8), 19-29. doi:10.3102/0013189X035008019
- Steinkuehler, C. (2005). The New Third Place: Massively Multiplayer Online Gaming in American Youth Culture. *Tidskrift Journal of Research in Teacher Education*, 3(3), 17–32.
- Steinkuehler, C. A. (2004). Learning in massively multiplayer online games. In Y. B. Kafai, W. A. Sandoval, N. Enyedy, A. S. Nixon, & F. Herrera (Eds.), *Proceedings of the 6th International Conference of the Learning Sciences* (pp. 521-528). Mahwah, NJ, USA: Erlbaum.
- Yee, N. (2008). *Social Architectures in MMOs*. Retrieved from <http://www.nickyee.com/daedalus/archives/print/001625.php>
- Yee, N. (2009). Befriending Ogres and Wood-Elves: Relationship Formation and the Social Architecture of Norrath. *Game Studies. The international journal of computer game research*, 9(1), 1-15. Retrieved from <http://gamestudies.org/0901/articles/yee>

Presence of cultural heritage institutions in online social media: the Greek case

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Social media and Cultural Heritage Institutions

A trend of decreasing cultural heritage audiences in the last twenty years (Simon 2010), has highlighted for cultural heritage organizations the need to develop experiences that are valuable and compelling to broad and diverse audiences in order to regain their interest.

Cultural heritage experiences based on the consumption metaphor (the cultural heritage institution produces “information” in digital or other form, for the user to consume) result in limited ability to remember, digest and do something with the information offered, a phenomenon called *museum fatigue* (Bitgood, 2009). Instead, culture is created through the development of a relationship between the visitor and the museum. This kind of museum follows the Agora metaphor (Proctor 2009) where the key concept is participation and the visitor has an active role in the process of culture production, while at the same time the museum opens to other museums and organizations of culture.

Thus, a way to address the problem is to foster a participatory culture (Simon 2010) and try to engage communities of potential visitors who are active in other contexts of social activity. The pervasiveness of social media in the broader culture appears to make them uniquely situated for this purpose. However, many well-established institutions are reluctant to embrace social media practices that seem to undermine their curatorial authority over cultural heritage content (Russo, Watkins, Kelly and Chan, 2010). At the same time, given the saturation of the social media landscape, attracting audience attention and participation are far from straightforward.

In general, advanced museum practices with social media move in two directions: (a) developing custom-made platforms for social participation, such as content contributions, social tagging and crowdsourcing games, around the online museum collections; and (b) designing structures for participatory activities, ranging from commentary and suggestion prompts to involved ARGs that incorporate community supplied digital content, by tapping into the functionalities of readily available and commonly used social media (Facebook, Twitter, flickr, blogs, etc).

In this presentation, we attempt an examination of the still timid ventures of Greek cultural heritage institutions using readily available social media services. We focus specifically on patterns of activity on Facebook, which is the social media platform most commonly used.

Overall Patterns in the Social Media Presence of Greek Cultural Heritage Institutions

While there are Greek cultural heritage institutions making use of platforms such as YouTube and Pinterest for sharing content about events and exhibits, as well as Twitter for announcements, the common denominator of institutions that have a social media presence is Facebook. Their number of subscribers ranges from a couple of hundred to over five thousand. In addition, of all platforms used, Facebook provides more functionalities related to building a community through social networking, therefore it is more elucidating with respect to patterns of social engagement and participatory activities.

Overall, Greek cultural heritage institutions adopt a broadcasting model of communication in their Facebook presence. They use it to announce upcoming events, to inform about their operation and their services and to share digital content (images, videos and music) from their exhibitions and other activities. While it may seem that this amounts to little more than using Facebook as an alternate museum website, what the social media platform is contributing is what may be called multiplicative broadcasting; the main participant responses are a considerable amount of *likes* and *shares*. This seems like limited interaction, but let us consider how the *share* adds value to a regular museum announcement through social networking: subscribers receive it in their newsfeed, rather than looking for it and then they share it, i.e. they themselves contribute to getting the message out. So there is a social media function here that raises issues for further research: what do those *shares* look like as social media behavior? do they include commentary? where are they posted? how do they multiply and spread? And further, what does that tell us in terms of tracking social media presence of museums? one implication is that we should not be concentrating only on what is happening on the museum social media location, but also on what users are doing in their own locations with the content that the museum makes available.

By contrast, the use of *comments* is very limited in number and also very limited in content. Visitors use comments to write short, generic congratulatory remarks for posted pictures or announcements of events, and to make simple requests for information. Museum staff occasionally uses the *comment* function for adding information to the related post.

Overall there seems to be limited engagement of the audience in participatory dialog around content shared on behalf of the cultural heritage institution. However, there are a few instances where more involved dialogic exchanges do occur. These are the focus of the next section.

Instances of Audience Dialogic Engagement through Social Media

There were four cases of Facebook posts on behalf of the cultural institution that elicited more involved audience responses and engagement in dialog. In three of these cases the posts were clearly designed to invite a response.

- The Benaki Museum successfully elicits comments from its audience by making topical postings from its collections: for example, on Election Day (May 6, 2012), the posts included photographs related to historical parliamentary elections.
- The Acropolis Museum published the post “the making of a replica/ the moment the mold opens” that directly prompts the audience to comment on how

this moment feels, also receiving several responses

- Finally, the Noesis Science Center and Technology Museum, in the most involved effort to elicit participation, posted a visual mathematical puzzle for its audience. The announced plan of the museum was to post a hint everyday so as to keep the dialog going. Audience responses were indeed forthcoming. However, very soon a visitor offered what was essentially the correct solution to the puzzle, yet the museum staff seems to have stayed with their original plan of giving out pre-decided hints, resulting in a withering of the discussion. This was a very illuminating instance as to the challenges of designing a flexible repertoire of dialogic interventions (e.g. asking for reasoned agreement or disagreement, extending the problem etc) that are responsive to audience participation so as to open dialogic spaces and keep them open (Wegerif, 2007).

The fourth case is notable because it was occasioned by visitors perception that the content of a post (a photograph posted by the Benaki Museum) was intriguing and even controversial.

Discussion

The broadcasting model of social media use that predominates in the presence of Greek cultural heritage institutions on Facebook is consistent with an ambivalence toward the potential of social media to affect their curatorial authority. On the other hand, there seems to be participatory intent on behalf of the users who are comfortable with social media interactions and respond readily when the posted content invites their input (rather than merely informing) or when they are prompted to the dialogic exploration of a problem. However, sustaining such participation and developing it into an online community of interest around the institution's authoritative collections and curatorial knowledge is a design problem (Simon 2010); cultural heritage institutions need to design and refine participatory experiences for "opening up and resourcing ...dialogic spaces" (Wegerif 2007) that enable the social media participants to expand their shared understandings as they engage with cultural heritage content.

References

- Bitgood, S. (2009). Museum Fatigue: A Critical Review. *Visitor Studies*, 12(2), 93–111.
- Proctor, N. (2009) "The Museum as Agora: What is collaboration in museums 2.0.", WebWise Conference, Washington D.C.
- Ridge (2011), Everyone wins: crowdsourcing games and museums, MuseumsNext Conference, Edinburgh
- Russo, A., Watkins J., Kelly L., and Chan S. (2010) "Participatory Communication with Social Media." *Curator: The Museum Journal* 51, no. 1.
- Simon, N. (2010). *The participatory Museum*. Santa Cruz, California: Museum 2.0. Retrieved from <http://www.participatorymuseum.org/read/>
- Wegerif R. (2007), *Dialogic Education and Technology*, Springer

Social Networking: Strategies and Persuasive Communication

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Social networks have revolutionized communication. They have had a huge impact on communication and relationships between people, to the point that they have changed our daily habits. But the revolution is not quite over yet. There are still ongoing substantial changes, which are, for the time being, difficult to decipher exactly. The Internet, in fact, changes too quickly for us to make precise analyzes. For decades people in the media have been used to well-established practices both for planning, and for the implementation and measurement of their activities. With the Internet and social networks this is not the case. The subjects in question are on the Internet, however, infinitely more. Any process could be challenged and overturned within a few hours.

Flexibility becomes of prime value in business organization. In the near future social networks could also identify with the network itself. All traditional sites could become social networks or megablogs. In fact the demand for information is continually growing - both in the generic and in the wider sense - in real time and shared where there is mass participation.

Now, it may seem strange but the best definition of the social network can be found on Wikipedia: A social network is a group of individuals linked together by different social ties, ranging from casual acquaintance, work relationships, family ties. This definition is precise, concise, and effective.

Now, of course, social networks have always existed in the real world and not been invented recently. To quote Aristotle, man is by nature a social being. Man has always had the need to live in a social network. What has radically changed the shape and the social impact of social networks is, of course, the Internet, which has given a new dimension to social networks.

The social network is therefore meant to be a service whose primary function is to allow or facilitate the organization and management, via the Internet, of a map of one social community through offering the facility of being able to create and share content, conversations, or other social tools. We briefly summarize it in two essential points:

- 1) to allow or facilitate the management of social relations;
- 2) Social networks are a means but not a medium in the sense of "intermediary" (as in the mass media) but in the sense of a social tool, social media.

But why open a page for your company, on Facebook for example? Choosing to represent your company on a social networking site with a page that bears its name means get involved in all aspects of communication: from products to CSR (Corporate Social Responsibility), from management to human resources. People on social networks are used to interacting with other people to turning to them for every need. People who encounter a brand on Facebook or on other social networks think they can ask any question and expect a response because it is what is expected from

someone who uses that means of communication. It will not be easy to make such statements as: "on this space we are not prepared to talk about issues regarding management" or "our recruiting and laying-off policies will not be discussed here.", and have them accepted. If you are present you have to go the whole way.

Social networks have become an extraordinary means of dissemination of ideas, products and projects. It is clear that they have become an indispensable tool for any company wishing to grow.

There is not, however, a strategy common to all: each has its own strategy based on the individual company. Communicating via social networks is inherently different from communicating via the media, where the message is prepared and delivered to a pre-defined audience in a way which is the same for everyone. On social networks communication takes place on impulse, it is spread by means of the participation (engagement) of stakeholders who are almost never interested and directly involved, but want to be properly informed and able to talk about and help build a product, service or, even maybe, and why not?, a better society.

A communication strategy on the social network is, and must necessarily be, shaped and modulated, according to what one wants to communicate, the communities with which one wants to interact and the environment in which it operates.

The Approach of “Berris S.A.” to Turning Online Transactions into Social Experiences

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Introduction

The internet impacts business innovation by expanding reach and minimizing the time-lag to market. Not so long ago the goal of an online marketing campaign might only have been to entice the consumer to click through to a company’s website, but now the objective is to create “sustained engagement” with the consumer. The growing popularity of social networks such as Twitter and Facebook demonstrates how the internet is changing. Users are no longer simply downloading static data, but are increasingly interacting with each other, leading to a proliferation of social networks and other user-generated content sites. Li and Bernoff (2008) refer to this fundamental transfer of power from institutions to individuals and communities as „the groundswell“. Harris and Rae (2009) predict that Social networks will play a key role in the future of marketing.

Small business owners are discovering that social media marketing is quickly becoming an important method for driving business growth. Traditionally, large businesses have had an advantage over small business owners because they have had larger marketing budgets and could spend more money on outbound marketing techniques like print advertising and direct mail. Successful small businesses have long thrived on word-of-mouth to help promote their products or services. With social media, small businesses are now able to use free tools to help increase word-of-mouth while decreasing the need for outbound advertising platforms like the yellow pages.

This paper presents the case study of “Berris S.A.” (<http://berris.gr>), a small family business that produces traditional cookies. It is located in the north-west of Greece, in the region of Epirus, at the Industrial park of the city of Ioannina. The company’s sales network covers the whole of the Greek market through a logistics company. A local sales network also exists. The company was founded 8 years ago by the owner Nikolaos Berris, a professional with more than 54 years of experience in traditional bakery. Until recently, the company was based on the traditional methods of promoting and selling its products. In the face of the ongoing Greek economic depression and considering the rapidly changing and challenging business environment, the founder decided to upgrade the company’s scientific staff. There was a need for R&D support in food technology as well as specialist support in modern food marketing management.

Current Situation

Recently, Berris S.A. has embarked upon a social media marketing campaign aiming to increase the company’s impact in existing markets as well as to help in the development of emerging markets. The first step was the development of a new website. After a while, the first phone call from a client that found the company’s

webpage on the internet and was interested in its products was received. This incidence was encouraged the company to keep up work and direct attention on the use of social networks. The importance of social networks in marketing lies in its potential to increase website traffic through posting of relevant material and possibly increasing revenue.

As a next step accounts in various social media platforms were created (Facebook, Google+ and Twitter). In time it was realized that engagement in social media marketing is time consuming. Selection and posting of appropriate material as well as interaction with users is no easy task considering it has to be performed during normal working hours. Hence, additional time had to be invested on social networking in order to benefit from the publicity that such networks offer. It is expected that more active engagement in social media could increase active user base and thus visibility of the business through user interactions, especially if successful “viral” content is posted.

Moreover, it was noticed that people interacting with the accounts above belong to the age group between 25 and 34 years. Most of them highly educated and employed, as occurs from company’s Facebook page administrator panel. This leads to the conclusion that young, educated consumers are more likely to be interested in engaging in social media as a means of researching about the various aspects of the products they consume. Additionally, the growth rate of the subscribers’ number, on the social network profiles, depends on the time that is spent on these. The more time the company invests in social networking the most is the increase of its promotion rate.

Perspectives of Future Work

Modern marketing requires a focus on innovation and the building of brand relationships. A key issue that “Berris S.A.” had to bear in mind when considering the use of social networks for communicating with customers was the extent to which different segments of its customer base might be receptive to such approaches. The importance is to understand how customers use new media, so as to establish more effective ways of communication with them.

A key challenge when engaging customers through these social networks is how to give away power and control while at the same time avoiding embarrassment to the company. According to Leadbetter (2008): “...you are what you share”.

As a conclusion, it is hard to operate a website and social networks without any help from a specialist. Making a short term prediction it seems that every company is in need of an IT specialist. Even if this person isn’t a permanent employee, it could be an external associate.

It is vital for enterprises of 21st century to adapt to modern marketing and networking practices in order to remain competitive, close to their clients and open to all new needs and trends of the society. It is also important to promote products and values by keeping track of what market and technology demand.

References

- Harris, L. and Rae, A. (2009), Social networks: the future of marketing for small business, *Journal of Business Strategy*, Vol. 30 No. 5 2009, pp. 24-31.
- Leadbetter, C. (2008), *We-think: The Power of Mass Creativity*, Profile Books, London.
- Li, C. and Bernoff, J. (2008), *Groundswell: Winning in a World Transformed by Social Technologies*, Harvard Business School Press, Boston, MA.

Social Media marketing for SMEs

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Abstract

The current business situation in the region of western Greece is characterized by intense challenges. Especially SME's face problems like shrinking markets and very low profitability.

Getting "closer" to the customer is an essential practice, and while traditional marketing like advertisements in newspapers, magazines, TV and Radio stations is still utilized, it is mostly restricted to a very limited local range. Many SME's have websites to promote their offering, being products or services, but still the "word of mouth advertising", by which satisfied customers tell other people how much they like a business, product, service, or event, presents a very strong aspect of promoting a business, a concept that is very strong in Greece and in Southern Europe in general. Social media provide the modern tools to expand the customer base through online social presence and interaction.

Thus utilization of social networking sites as a route to effective communication and interaction with users should be seen as an opportunity. A very large potential customer base is searching online for services or products, but these people are also "talking" online about it³. It is not enough for businesses to have an online presence (website and pages on social networking sites), they also must be able to respond to user requests.

If potential customers are looking for something or have a problem, they are likely to post a comment on it. Often, instead of calling the supplier directly, users will simply access Facebook⁴, comment on the problem they are having and ask for input, or alternatively they will tweet about it on Twitter in order to draw on the expertise available in the online community.

This means that businesses have to monitor related social networks and to engage with their customers wherever they are and find a solution in real-time. This is a level of service that many users have grown to expect. In essence, SMEs who are not engaged in social networking risk being left behind and losing business to competitors who respond to issues more quickly.

The Social Media approach can provide practical solutions that respond to these problems, but the successful implementation often requires changes that companies have to perform. For SMEs these pressures are particularly intense, because the main goal is not to sell, it's a commitment that should add value to relationships with the customers, whether they use it for PR, customer service or marketing. Having an active Social Media presence can make a big difference to small and medium sized businesses, especially in markets where companies rely on word of mouth for promoting their products or services.

³ Steve Garnett, EMEA chairman at salesforce.com

⁴ <http://www.thedrum.co.uk/news/2011/08/18/only-1-smes-use-social-media-generate-new-business-prospects>

Our Company, DIADIKASIA SA, helps SME's to address the real and practical options available to businesses and entrepreneurs who want to adopt low-cost social marketing techniques to optimize the overall image and performance of their business. This includes creation of business profiles or pages on social media sites (like facebook and google+) and assists them in creating meaningful ways of interaction with the users.

Social Media Strategies for Tourism SMEs

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Social Media currently have the strongest market share of use among the most active internet user segments, as is expressed in time using the service and active participation. Social Media users tend to be the most active among others, connecting more frequently and participating by posting and commenting content and ideas. Social graphs tend to form the new Word-Of-Mouth mechanism and this fact is clearly not to be ignored by any marketer.

In this context, companies need (and must) position themselves in the major social media systems, in order to use them to communicate to prospective leads, engage current customers, and assess and study the experiences, opinions and feedback of customers that consumed their product and services.

The Tourism Industry is among the most relevant sectors for formulating and executing a strategy of using the Social Media: The service (lodging) itself probably is one of the most involving in terms of customer feelings, experience and personal preferences, and these customers now tend to express themselves in the social media. This fact is vital to be acknowledged and for these companies in order to assess customer satisfaction but also to position themselves in the competitive arena of emotional offerings in order to attract prospective customers satisfying their personal preferences.

Furthermore, Tourism SMEs (Small & Medium Enterprises) find that the social media offer that playing leveling field they desperately need while trying to compete to Tourism Enterprises with much stronger capabilities: It seems that Social Media, when used with discipline, focus and diligence can indeed offer impressive results to small Tourism Businesses.

When focusing in Social Media, a Tourism SME has to assess its competition, decide for its competitive offering, formulate its strategy, choose the social media channels and implement appropriate mechanisms that communicate the message and offering services to its prospective, current and past customers.

Knowledge Broadband Services SA (KBS SA) offers a complete solution for Tourism SMEs: easy2book is a modern web based system that accommodates the needs of small Hotels and currently enjoys a dynamic growth among well-established competitive products. Easy2book consists of several modules:

- CMS (Content Management System) especially targeting lodging companies
- PMS (Property Management System)
- Web booking engine
- IDS Channel Integrator (example of IDS include Expedia, Booking.com, Venere and others)
- Social Media extensions



The easy2book Social Media extensions help every small Hotel to design, formulate, execute and monitor social media campaigns. These campaigns currently can involve:

- Facebook posts and status updates
- Integration of the Facebook social graph to the easy2book database of prospective, current and past customers
- A complete Facebook web booking engine, so the booking experience is performed entirely inside the Facebook user experience
- Twitter posts (tweets) to the followers of the hotel
- Integration of the above to the current Hotel web site

APPENDIX V: List of Participants



Intersocial Workshop on Online Social Networks: Challenges and Perspectives (IWOSN)

Friday, June 15, 2012
Achaia Beach Hotel, Patras, Greece

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