Blog, Collaboration and E-Commerce
Theoretical and Applicative Research Project

Liciniu-Alexandru KOVÁCS¹, Gabriel Marius POP²
(1 Faculty of Business, Babeș-Bolyai University, 400174 Cluj-Napoca, Romania)
(2 Department of Informatization, Babeș-Bolyai University, 400091, Cluj-Napoca, Romania)

Abstract: This theme continues and completes another interdisciplinary project launched one year ago and its aim is to realize one or several models about e-business in Romania. As a consequence we can speak now about an extended project. The elaborated material will be useful for a large number of companies doing business in Romanian online environment. The team wants to elaborate solutions for e-businesses, as well as to create a complex and utile work, a starting point for companies wishing to exist in web lifestyle within a global economy. It will be elaborated a manual of blog and electronic commerce, both with theoretical and applicative aspects. This project will consolidate a research nucleus in blogs, collaboration and electronic businesses at Babeș-Bolyai University, the business administration department. The results of this extended project will have impact on several plans on the scientific community; we will publish a book, several articles in scientific publications, and we will participate to scientific conferences. A significant part of this project's results will be published with future occasions.

Keywords: internet, blog, collaboration, e-commerce, model.

1. Blog and Collaboration

Collaboration as a definition adapted from Wikipedia, is a recursive process (by recursion is understood that the phenomenon is defined by reference to itself) between at least two people and goes up to the organization (in this sense, the organization is a company, an institution or a form of association between several people) that intersect at points of common interest and involves sharing knowledge, acquiring available resources in order to build the defined common purpose. An important thing to note in the terminology of collaboration is that it does not necessarily mean a "leader" as it encourages decentralization and equality.

Using these features combined with the opportunity of the Internet environment to provide advanced instruments, one can talk about cooperation in achieving a common goal of many people in different places, in different countries but without requiring their physical meeting. An important element in pursuit of a creative process is the time that it takes place. We can well imagine two or several people on different continents, from different cultures, trying to achieve common results in the same area, each one with his contribution, without being in the same room, without having to use the same resources and especially each one using his working time. Of course, collaboration does not preclude meetings or discussions "online" but now the tools available to facilitate communication are to another level that can be understood only from within the Internet services. Unfortunately or (sometimes) fortunately this does not mean we forget the human interactions and their definitions. Their adjustment to this level are relatively simple but involve specific issues.
• have their own search engine;

• allows a very fast fluidization flow of information to users using the RSS (Really Simple Syndication or Rich Site Summary) technology that allows tracking update information by notifying the change that took place over time.

The next step is the growing importance of blogs to the online community and especially their introduction into the scene of online business which is manifested by:

• blogs offer to a company a closer to a user interface;

• the use of company’s blog leads to gaining traffic, which is similar to widening its market;

• blogs are an ideal place to promote existing products and announcing new products;

• by their ability (technically called “search-engine friendly”) to interchange links, blogs help to a much better company positioning in search engine rankings;

• public sale is made much easier through a blog, using services such as Google’s AdSense;

• blogs are easier to maintain than what is known as a newsletter (often a company uses newsletter and blog in parallel).

In the following we try to illustrate what it means to manipulate a blog or some other form of it today. Free web tools available at this time allow us to access the blog world without much technical involvement, which is a huge step in the collaboration process. Choosing a form to begin what is called blogging means to select the methods that are optimal for the proposed time and costs involved.

We have the freedom to choose from several options based on technical knowledge and ability to invest in terms of starting such a project. Thus, we can choose between these:

• use a stand-alone platform from a host company for blogs such as MindSay, TypePad, LiveJournal and Xanga;

• installing a blogging software on our own server, such as WordPress and MovableType;

• use a third company that hosts selectable software for blogs, for example Blogger and Webcrimson.

Starting from the simple use of specific and dedicated tools, one of the most popular known platform is www.blogger.com (Fig. 1). We introduced the history of this platform, which was acquired by Google. The reasons why so much was invested in this type of product is very simple: seize a wide audience in order to expand advertising opportunities. If we were to make an analogy with the real world of this “free” service, we could imagine a street full of buildings with apartments to be rented for free, the only condition being that the window of any room to display an advertisement. So anyone using free services on the one hand, advertise for those who pay on the other. It is a balance that works on the flow of visitors and to access ads. Noteworthy is the availability of the platform in several languages, which makes its extension to a higher level of globalization. So we have a tool available yet functional blog but limited in certain aspects.

Fig.1 The main page (in English) of www.blogger.com

As one can see, for accessing the service it is provided a friendly interface from which to select the language in which we conduct the session and then the access mechanism. We have to notice that for a new account are needed only three steps and there is no requirement for advanced technical knowledge.

After creating an account there are multiple settings possibilities which have evolved from one version to another. The idea is that data modeling of blog content to have an impact as powerful is possible. To discuss technical elements brought by each option involves an extended area, so this will be addressed in a dedicated article.
One other possible solution is to install a specialized blogging software on one's own or ISP (Internet Service Provider) server. One of the best solutions is WordPress (Fig. 2). It provides stability in terms of use on a UNIX platform, without causing errors in installation and configuration. It offers the opportunity to be developed as far as we know through programming. One of the advantages is the developer community around the platform which provides now a variety of integrated solutions.

A key to using this professional solution is given by the ability to apply any free or paid theme-template without affecting the defined content or functionality. Thus, the user interface is easily manipulated as the solution gives a high scalability. Installing and configuring this platform requires some technical knowledge involving the study of elements such as databases and web systems embedded with them, and knowledge of files transferred by FTP (File Transfer Protocol) under UNIX platforms. It should also be known the rights of read, write and access these files. Panel management is intuitive, but also complex. The many possibilities are starting points for further development of the product. We have access to all facilities that we need to promote and particularly to handle the blog. From our point of view, WordPress is a versatile complex platform with high level of accessibility and open for modification.

An important aspect of blogs is their promotion. To reach its aim the blog should be known in the online environment. The technique to realize it is known by the acronym SEO (Search Engine Optimization). Adapted from Wikipedia, SEO is "a sub-category of the online marketing, practiced with the arrival of the first sites on the Internet, and representing all the techniques by which a website is brought to a form that is driven above the list of results data of a search engine for various keywords".

To achieve this, a blog must meet a set of rules among the most important are:

• characteristics of the target audience to be addressed are well known;
• provide quality content, with text, illustrations and photographs, as appropriate;
• be updated regularly, at least weekly, preferably daily;
• it relates to the content and keywords are in headlines;
• be found in the communities;
• the holder to visit other blogs/directories where to leave comments;
• indication blog wherever possible to be passed on;
• blog entry is indexed in known directories;
• exchange links by freely use cheap publicity tools, including the blog communities.

Finally we would like to mention a few words about micro-blogs. They have appeared recently and are the next step regarding the phenomenon of blogging. Microblogging allows users to send multimedia updates (short text, photos and/or audio-video) publishing them to be viewed by any person or a small group, at the users choice. These messages can be made by a variety of means including text messaging, instant messaging, e-mail, digital audio or web addresses.

The best known is the microblogging platform Twitter at http://twitter.com (Fig. 3). Registration is simple and as easy to use as possible. On the timeliness of this type of communication is what is called "following" and "followers", i.e. the public who seeks your updates. The simplicity of this platform is its strong point. It should be used together with a presentation site, blog or a CMS (Content Management System). Twitter popularity has grown exponentially in recent years due to its dedicated marketing campaign.
2. E-commerce System

In order to implement an e-commerce system, from the architectural point of view we need the collaboration of four components (electronic & informational sub-systems) for the following roles:

- Client
- Trader
- Transaction system
- Payment Gateway

The e-commerce is forcing organizations to reconsider the flow of information and the coordination mechanisms. Many studies come with new paradigms relative to the way of organizing work under the influence of IT&C. The processes and the relations are organized on new basis and this involves important organizational changes. The processes are integrated into a new value chain based on e-commerce. In order to generate added value, many enterprises restructure their value added chain via e-commerce. The evolution towards a web value chain is now a reality for many enterprises. This chain eliminates the intermediary and goes closer to the end user. In addition, the web value chain allows capitalization of knowledge and information.

The safety of data comes with new aspects which affects the business relations on the web. Here we can speak about confidentiality, integrity and availability, very important elements that maintain competitiveness, profitability, the legal aspects and the image of a company in the digital economy.

The security standards are to be certified as tasks for the e-commerce audit and computer-based support systems, respectively. But the e-commerce has some distinguished considerations against those specific to informational systems audit. The e-commerce has the following problems relative to data security and risk management:

- authentication and unauthorized access
- firewall
- data encryption
- safe transaction administration
- provocative answers
- protection against viruses
- control of system availability

The electronic relations and the e-commerce level of growth tell us a lot about the opening and level of development of an economy. This new branch of human activity can re-launch the global economy affected by recession, fact recognized by some countries which allocate important amount of public funds in order to develop the sector. According to data and information about the level of development of electronic commerce published on www.themoneychanel.ro website, Denmark has the highest developed economy based on the Internet, followed by Great Britain and Sweden. In the vicinity of Romania, more precisely in Eastern and Central European countries, the general development had a positive effect on e-commerce. The investments in e-commerce grew year by year especially in B2B direction (90%). Despite the existence of factors that slow the development of e-commerce in Romania (still high costs for Internet services and a low penetration), the extension of access to a broadband causes a large dynamic market. For future development, Romania needs more online users and more time allocated to online activities. According to data obtained from Economist Intelligence Unit – Figyelonet database, the total market value of electronic commerce in Romania grew in 2007 compared to 2006 with 263%;
in other words, that means a 34.8 million Euros in 449,000 transactions. More recent data and information which will be available soon will probably indicate the decrease of these values.

In Romania, the number of e-shops and their turnover grow yearly – about 80% are B2C, 7% are interested in B2B and 13% are web shops. This tendency is not at all spectacular if we observe that the total turnover of these e-shops doesn't exceed 0.001 of the total turnover in the Romanian economy. The products and the services of these e-shops cannot be separated from the complimentary services which cause the development of their activities. Such services (free delivery, e-mail messages, access to more information, the possibility of price comparison for similar products/services) can influence potential clients to choose e-commerce instead of traditional acquisition. More details on electronic commerce in Romania, available research infrastructure, project management and project feasibility can be found in paper [1].

3. Project Objectives

The goal of this theme is to elaborate a model regarding blog, collaboration and electronic commerce in Romania, as well as an associated handbook, which should offer solutions for the companies that are willing to develop such activities in the context of a global economy.

The major objectives are:
1. Analyze and evaluate up-to-date blog, collaboration and electronic commerce technologies in Romania.
2. Supplying stable, secure and efficient electronic commerce solutions for Romanian companies that want to begin or are already doing online commercial activities.
3. Realize an electronic shop prototype provided with a blog as main promotion tool.

4. Methodology of the Research

The methodology of the research will be correlated with a gradual dissemination of project’s results as follows:
• Identify B2B and B2C website categories in Romania;
• Identify blog categories in Romania and elaborate comparative charts on certain topics;
• Compare the identified models for establishing the differences between these and the situations in which a model or another could be used in electronic commerce applications;
• Determine the degree in which the Romanian companies are prepared to participate to the electronic commerce and associated promotion tools;
• Use of documentations as a base for a comparative study regarding the functioning of electronic commerce in Romania and in other countries;
• Evaluate the buyer-seller relation in the Romanian virtual environment;
• Study solutions that would lead to reducing the digital divide between Romania and some developed countries;
• Prepare a computer aimed to be web server for an e-shop;
• Realize of an e-shop prototype with a blog as main marketing/promotion tool;
• Test the usability of the proposed software package.

Also, we will allocate efforts for the followings:
• Monitor traffic growth to target e-commerce sites and blogs through tracking implemented in the code, advertisement messages from inside blogs, and relevant promotion messages;
• Use of monitoring services to specific sites such as Google Analytics and Trafic.ro in order to compare different types of optimizations;
• Use some keywords identified by the monitoring instruments and make comparison within a set of websites that apply the blog as marketing tool;
• Develop of an API (Application Programming Interface) that enables comparative monitoring of several websites based on defined keywords that can be found in searches of Internet users. The results of this API will be indexed in a database accessible from the web, which should help to find clients on the basis of relevant information.

5. Preliminary Results

We were very eager to obtain results that encourage us. In this sense, we used a free instrument that is called Webmaster Tool. With its help we tried to obtain relevant data related to the blog under our analysis which can be found at [http://bucataria-sylviei.ro/](http://bucataria-sylviei.ro/). This engine is based on a complex algorithm called Page Rank, which "is a value that Google assigns to a web page based on the importance of the page on the internet that is determined by the number of incoming links to that web page and few other factors."[1]

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We did the Top Search Queries analysis over several months in order to optimize the differences observed in searches based on keywords. We can see from this analysis the words searched by Google that led to the opening of the mentioned blog. Table 1 reproduces the results for only two months (November and December, 2009).

Table 1 Results for Top Search Query analysis on http://bucataria-sylviei.ro/blog

<table>
<thead>
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</table>

More recently, we extended the analysis based on page rank and keywords with the use of a paid instrument called Seo Rank Monitor 2. Through this tool we can find the rankings compared to the most popular search engines. Fig. 4 reproduces a report of the positions of components that are followed in the trafficking of a blog.

Fig. 4 The positions of components that are followed in the trafficking of http://bucataria-sylviei.ro/blog

Domain Monitor

Results for February 10, 2010

Domain Stats

Below you will find some statistics for your domain in different search engines. You can export those values to CSV. Click on chart link to see historical data accompanied by a handy chart.

<table>
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<th>Data type</th>
<th>Google.com</th>
<th>Google.ro</th>
<th>Yahoo</th>
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<td>-77</td>
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</table>

2 "Powerful management tool to provide valuable info about rankings in any major search engine to its users. Keep track of your competitors, linkup with your Google Analytics profile and find out which of your keywords are really worth optimizing." More details at http://www.seorankmonitor.com/
The same tool gives us useful charts related to four popular search engines. Fig. 5 illustrates the situation of indexed pages which have relevant data and fig. 6 the evolution of a given keyword.

6. Necessary Human Resources

Human resources as mentioned in paper [1]:

1. Zoltán Élthes, PhD with competencies in: Information systems development, Decision support systems, Electronic commerce and E-learning;

7. Conclusions
The elaborated material will be useful for students and a large number of companies doing e-business in Romania. The team wants to elaborate solutions for blogs, collaboration and e-businesses, as well as to create a complex and usable work. The results of this enlarged project will have impact on several plans on the scientific community. It will be elaborated a manual of blog, collaboration and electronic commerce with theoretical and applicable aspects. We will publish a book, several articles in scientific publications, and we will participate to scientific conferences. This project will consolidate a research nucleus at Babeş-Bolyai University, the business administration department.

References