Towards a Marketing Strategy for Open Source Software

Valentina Lenarduzzi
Università degli Studi dell'insubria
Dipartimento di Informatica e
Comunicazione

Via Carloni, 78
I-22100 Como (ITALY)
valentina.lenarduzzi@uninsubria.it

ABSTRACT

Open Source Software (OSS) communities do not often invest in marketing strategies to promote their products in a competitive way. The web pages of OSS products are the main communication channel with potential users and they should act as a product's shopping window. However, even the home pages of well-known OSS products show technicalities and details that are not relevant the vast majority of users. So, final users and even developers, who are interested in evaluating and potentially adopting an OSS product, are often negatively impressed by the web portal of the product and turn to proprietary software solutions or fail to adopt OSS that may be useful in their activities.

General Terms

Management, Measurement, Economics.

Keywords

Open Source Marketing, Open Source Assessment.

1. INTRODUCTION

The usage of Open Source Software (OSS) has been continuously increasing in the last few years, mostly because of the success of a number of well-known projects.

However, the diffusion of OSS products is still limited if compared to the diffusion of Closed Source Software (CSS) products. There still is reluctance to massive adoption of OSS, mainly due to two reasons: (1) lack of trust, as final users are often skeptical of trusting and adopting software products that are typically developed for free by communities of volunteer developers that are not supported by large business companies; (2) lack of marketing strategies.

OSS developers often do not pay attention to marketing, commercial, and advertising aspects, because these activities require a huge amount of effort and are not very gratifying.

In the last few years, several research works focused on OSS quality aspects, but there is a lack of attention on the OSS marketing. In this work, we want to fill this gap by finding a set of marketing models for homogeneous OSS products.

This paper reports on the PhD program that will be carried out by the author in the next three years. We aim to provide help to

OSS producers and maintainers to promote and advertise their OSS products with an effective and low-effort marketing strategy.

The remainder of this paper is structured as follows. In Section 2, we report a concise literature review, and how the proposed research fits in the closest existing research in the field. Section 3 reports the approach taken in this work, Section 4 shows the current status and the results achieved so far.

2. RELATED WORKS

In this section, we describe the main literature on this field including studies on general marketing, new media OSS adoption and selection, web usability.

2.1 Marketing

Customer value is a very important point for companies as an indicator of the effort needed to acquire a particular customer. Traditional marketing does not take into account that the extent to which, in addition to buying products themselves, customers may influence others to buy some products [13]. This is especially true for OSS products where usually people trust other people's opinions when they have to adopt a new OSS product [14], generating so-called viral marketing [15].

OSS products, often produced with as low a budget as possible, may not have the possibility to use the same communication channel of CSS. Consequently, OSS usually needs to count on word of mouth to get a higher reputation [5].

Usually, people that need to adopt a new OSS product are influenced by both opinions and the product website [6]. OSS websites act like a shopping window. In a real shop, if customers do not like the products displayed, they can walk for another shop and look for something else. But if the shops are located in different cities, customers probably will give a chance to the existing shop, even if the shopping window does not propose exactly what they want. This is not applicable to OSS. If users do not like an OSS product's website, they can easily surf for another product without any time and place problems. So, a website that does not display the right information effectively has an high probability to lose its customers [6].

2.2 OSS adoption and selection

Before committing to using a software product, people need to collect information about the product in order to be able to evaluate it. During software selection , users and developers usually collect information about software products from official websites. This is especially true for OSS products, which are typically distributed exclusively via the web.

The type of information commonly used by the users when they evaluate OSS projects has been investigated in the last few years, and several OSS evaluation methods have been proposed. Their aim is to help potential adopters understand the

characteristics of the available products, and evaluate the pros and cons of their adoption. Some of the best known OSS evaluation models are: OpenBRR [1], QSOS [2], OSMM [3], and OpenBQR [4].

The evaluation process of all of these methods is mainly organized into an evaluation step and a scoring step. The evaluation step aims at collecting the relevant information concerning the products from the OSS website. In this phase, the goal is to create an "identity card" for every product with general information, functional and technical specifications, etc. The quality aspects of the selected products are evaluated and a score is assigned according to the evaluation guidelines provided by each method. In the scoring phase, the final score is computed by summing all the scores calculated in the previous step.

One of the most important problems of an evaluation model is the definition of the information to be evaluated. This information has been defined according to experience and the literature, but it is often unavailable and not useful for most users. Based on [6] the vast majority of OSS websites does not provide the information needed by end-users.

Basilico *et al.* defined OP2A [6], a method for evaluating the quality of the website that hosts OSS products. Unlike other evaluation methods, OP2A evaluates the quality of the website instead of that of the product and aims at ensuring both the availability of information and its accessibility.

2.3 Web usability and certification

Another important research field is related to website's certification and usability. Users can easily reach a website that may contain all required information, which, however, may be provided in a very complex way, so users may get quickly lost.

A certification schema proposal for Italian Public Administration website quality was defined in 2001 [7], based on the information that the Public Administration must publish on its own website. This information was defined by investigating the quality aspects –e.g., usability and accessibility– of 30 Italian Public Administration websites.

Since 1994, the World Wide Web Consortium (W3C) has defined several standards, guidelines, and protocols that ensure long-term Web accessibility to everybody, whatever their hardware, software, language, culture, location, or physical or mental ability.

In 2008, W3C released the second version of the "Web Content Accessibility Guideline," aimed at making Web contents more accessible [8]. Usability is defined by the International Organization for Standardization (ISO)[16] as: "the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use." Some usability studies show problems in Sourceforge [9]: Arnesen et al. [10] showed several problems, mainly concerning the link structure and the information organization. Another study identified usability problems both with Sourceforge and with the Free Software Foundation [11] website by means of eye tracker techniques [12].

3. THE APPROACH

Starting from OSS communities and OSS producers requirements, we will analyze the needs, strength, and weakness of the community to identify the most suitable marketing strategies for a set of OSS products.

Starting from the analysis of new media marketing including

web marketing, user generated contents and web advertisement, we will identify the common marketing strategies for products advertised on websites.

Then, we will analyze the marketing strategy of a set of well known and successful OSS products and compare them with their CSS competitors to highlight commonalities and differences on the factors that affect their marketing.

Afterwards, based on the results of the previous step, we will study which marketing factors can be most influential in the adoption of OSS and how to use them to effectively market OSS.

Finally, we will build a set of marketing models for OSS products and we will apply these models on an existing OSS product.

3.1 Marketing of new media

In this activity, we will identify commonalities and differences in new media marketing, including both classical communication channel and new media such as forums, blogs, newsgroups, and social networks. Marketing strategies for a set of well known OSS and CSS products will be analyzed, to identify the most suitable parts that will be applicable to OSS.

3.2 OSS marketing

OSS differs from other software products because of its open nature. OSS can be produced by companies and communities and, in some cases, with a collaboration between communities and companies.

Therefore, OSS has different business models than CSS: OSS producers usually do business by providing support, while CSS does business on licenses.

In some cases, big companies support OSS products, and OSS can be advertised like CSS. Some well-known success stories of OSS marketing include the Mozilla Foundation, a non-profit organization dedicated to preserving choice and promoting innovation on the Internet, which on December 2004 has placed a two-page ad in the New York Times.

The vast majority of OSS product producers do not take into account marketing strategies and keep developing without explicitly targeting their final customer, mostly because of time and resource constraints.

3.3 Analysis of relevant OSS marketing strategies

In this activity, we will analyze the marketing strategies for a set of well known and successful OSS products. OSS products will be grouped in homogeneous categories to identify commonalities and differences and gather information on their general intrinsic characteristics and the way the software is mainly advertised and distributed. Finally, success and failures cases will be analyzed.

3.4 Which factors influence OSS marketing positioning

In this activity, based on the results of the analysis carried out in the activity of the previous section, we will investigate the factors that influence the OSS marketing positioning compared to CSS. Moreover, we will also take into account a set of successful and unsuccessful stories of both OSS and CSS.

3.5 How to use the useful marketing factors

In this activity, we will investigate how to provide the factors defined in the activity described in Section 3.4 to the final users. First, we will investigate how to provide this information through the official website to extend or refine OP2A and investigate the usability of the websites.

Then, we will take into account other communication channels including new media (blogs, newsgroups and social networks) and classical communication channels (newspaper, TV …).

Finally, we will test the applicability of the OP2A refinements and usability advice.

3.6 Model building

This activity will be split into four parts. In the first part, starting from the results achieved in the previous activities, we will define a set of marketing models suitable for different OSS product categories. These models will be applicable to different kinds of OSS products and will be useful for both existing products and new OSS products or start-up companies to help them produce a successful business plan.

In the second part, we will test the applicability of the newly defined models. The information collected during this test will be used to confirm and enrich the models defined.

In the third part, based on the results of the tests carried out in the second part, some marketing factors may be deleted while others may be added. The information collected in the second round of experiments will be used to confirm and enrich the models obtained in the first round of experiments.

Finally, results and the analysis of the data will be packaged into models and lessons learned that will be subjected to a confirmatory fourth round of experiments.

4. CURRENT STATE AND EXPECTED CONTRIBUTIONS

The PhD program started in January 2011. During the first year, we will work on the identification of the common OSS marketing strategies, while we plan to carry out the next part of the program in the following two years.

The expected contribution of this work is to improve the distribution of OSS and help OSS producers and maintainers advertise and promote their software with low effort to provide a set of marketing steps for a set of homogeneous OSS products..

5. REFERENCES

[1] Wasserman, A., Pal, M., Chan, C., "Business Readiness Rating Project", Whitepaper 2005 RFC 1 http://www.openbrr.org/ (Last visited: Jan., 2011)

[2] Atos Origin, "Method for Qualification and Selection of Open Source Software (QSOS)". Web published: http://www.qsos.org (Last visited: Jan., 2011)

[3] Golden, B., "Making Open Source Ready for the Enterprise: The Open Source Maturity Model", from "Succeeding with Open Source", Addison-Wesley,2005

[4] Taibi D., Lavazza L., Morasca S., "OpenBQR: a framework for the assessment of OSS", Proceedings of the Third International Conference on Open Source Systems (OSS), Limerick, Ireland, June 2007. Springer, pp. 173–186.

[5] D. Taibi, M. Chinosi, L. Lavazza *"BlogMeter. Web Sentiment Platform"*, TOSS 1st International Workshop on Trust in Open Source Software, Co-located with OSS 2007, Limerick, Ireland, 14 June 2007

[6] Basilico G., Del Bianco V.,Lavazza L., Morasca S., Taibi D., Tosi D.,OP2A: Assessing the Quality of the Portal of Open Source Software Products. WEBIST 2011 - 6-9 May 2011. Noordwijkerhout, The Neederlands

[7] Minelle, F., Stolfi, F. e Raiss, G., "A proposal for a certification scheme for the Italian Public Administration web sites quality", W3C – Euroweb Conference. Italy, 2001.

[8] W3C raccomandation, Web Content Accessibility Guidelines (WCAG) 2.0, 2008. Web published: http://www.w3.org/TR/WCAG20/ (Last visited: Sept.2010).

[9] Sourceforge Web page: http://www.sourceforge.net (Last visited: Jan. 2011).

[10] Arnesen L. P., Dimiti J. M., Ingvoldstad J., Nergaard A., Sitaula N. K., "SourceForge Analysis, Evaluation and Improvements", Technical Report, May 2000, University of Oslo.

[11] FSF Free Software Foundation Web Page: www.fsf.org. (Last visited: Jan. 2011).

[12] Jacob R. J., "The use of eye movements in humancomputer interaction techniques: what you look at is what you get". ACM Transactions on Inf. Syst., Vol.9, No. 2 (Apr. 1991), pp. 152-169.

[13] P.Domingos. "Mining Social Networks for Viral Marketing" *IEEE Intelligent Systems*, Vol. 20, No. 1. (2005), pp. 80-82

[14] V.Del Bianco, L.Lavazza, S.Morasca, D.Taibi: "A Survey on Open Source Software Trustworthiness: Which Factors Influence Trust in OSS?" accepted for publication in IEEE Software

[15] Jure Leskovec, Lada A. Adamic, Bernardo A. Huberman. "The dynamics of viral marketing". In EC '06: Proceedings of the 7th ACM conference on Electronic commerce (2006), pp. 228-237. doi:10.1145/1134707.1134732 Key: citeulike:2250279

[16] ISO/IEC 9126-1:2001 "Software Engineering—Product Quality—Part 1: Quality model", June 2001.