

Business models based on open source software: case of Mozilla

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ABSTRACT

In this article we presents some of the business models in open source software (OSS), which often refers to the new ways of earning income as traditional model of selling software products. We presents the case of Mozilla Foundation and compare some of it's properties with well defined models in OSS. We stress out some of important and interesting facts that are unique by business model of Mozilla Foundation.

Key Words: *Business model, Open Source, Open source licenses, Mozilla, Revenue*

1 INTRODUCTION

Open source software today established sophisticated movement which has evolved in last 30 years of computer history. Its products are some of the most stable and widely used software on the globe. The term Open source defines the source code of software that is made available to the general public without intellectual property restrictions. Similar than proprietary software also open source software uses licenses. However those licenses differs from standard licenses in radical way, instead of definitions for restrictions of the use of software, open source licenses define the way to change, modify and distribute the source code of the product. With phenomena of open source we are dealing with radical different thinking and philosophy and this generate new models for software distribution and new way of creating business. Today open source paradigm offers variety of business models which often conflict. It seems that there are as many philosophies and business models for developing and managing open source software as there are major products. In this paper we will compare some of the general models and present their properties in relation to the Mozilla Foundation practices.

Business models based on open source software are often referring to the new ways of earning income that are being implemented, since the traditional model, the selling of proprietary software, is no longer so clear cut. In general Business model refers to the way an organization gathers their value. Companies need to consider an important factor when they take part in an open source software project: how to obtain the economic return that will justify their investment. Following we are showing the example of Mozilla.

The Mozilla project started in 1998 with a release of Netscape browser source code. By creating an open community, the Mozilla project had become larger than any other company. Mozilla 1.0 was released in 2002. This version featured improvements to the browser, email client and other applications included in the suite. In 2003 the Mozilla project created the Mozilla Foundation, an independent non-profit organization supported by individual donors and a variety of companies. The new Mozilla Foundation continued the development of software, such as Firefox and Thunderbird. Mozilla Foundation also officially took on the role of promoting openness, innovation and opportunity on the Internet. Firefox was released in 2004 and became a big success. In less than

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a year Firefox had been downloaded over 100 million times.

Mozilla celebrated its 10th anniversary in 2008. In ten years the community has shown that commercial companies can benefit by collaborating in open source projects. Slovenian Mozilla community was established in 2002. Slovenian community is one of the most successful Mozilla communities in the World. Slovenia was the first European country, where Firefox market share surpassed Internet Explorer.

2 OPEN SOURCE SOFTWARE

The main difference between proprietary software and Open Source Software (OSS) is that proprietary software normally requires payments for licenses and restricts or prohibits modification or distribution of source code. The proprietary software business model is used in commercial organizations such as Microsoft, Adobe and other. On the other side OSS allows users to install, copy, modify and redistribute source code with few, if any, restrictions.

There are more than 50 open source licenses certified by the Open Source Initiative (OSI). The most common used are General Public License (GPL), Lesser General Public License (LGPL), Berkeley Software Distribution License (BSD), Apache License and Mozilla Public License (MPL).

Table 1: Common licenses and their characteristics

License	Type	Derivative	Bundling
Berkeley Software Distribution (BSD)	Permissive	No restrictions	No restrictions
Apache	Permissive	Apache name not allowed in marketing	Apache name not allowed in marketing
Mozilla Public License (MPL)	Restrictive	GPL	No restrictions
Lesser General Public License (LGPL)	Restrictive	GPL or LGPL	No restrictions
General Public License (GPL)	Restrictive	GPL	Only GPL
Proprietary licenses	Restrictive	Not allowed	Restricted

We can divide open source licenses into two opposite camps. Restrictive licenses include LGPL, GPL, MPL and permissive licenses which include BSD and Apache licenses. Table 1 shows the main differences among these licenses. On the other hand we can see the difference between open source licenses and proprietary licenses. Permissive licenses have academic roots. They allow but don't require the distributions of source code for derivate works.

3 BUSINESS MODELS

As open source is increasingly becoming a way to generate business in the software industry, interest about business model for open source has steadily grown. Open Source Business Model (OSBM) is relatively new business model. To have an OSBM means that you also have the open source licensing strategy.

The main reason the company chooses an open source licensing strategy is to spread their software product to be widely used. It also gives an advantage in development as source code is open to anyone who wishes to contribute. Licensing and business models should be considered as one system. There are many definitions of the term “Business Model”. Known example of the definition may be “A story that explains how an enterprise works” (Magretta, 2002). In general business model refers to the way an organization gathers value. Organizational sponsors for open source projects are one of the less researched areas compared to other areas of open source software. Different authors have different classifications about OSBM. The classification provided in “Setting up shop: the business of open source software” (Hecker, 1998) is one of the most used classifications of business models. They are quite wide ranging classifications for business models based on open source software. There is no clear identification of the criteria on which the classifications are built. The approaches are mainly descriptive, which results in a list of potential business activities companies and organizations can do in open source. We have decided to summaries the classifications in table 2 and focus on how the company revenue is generated.

Table 2: Business models based on open source software

Model	Source of revenue	Type of license	Price opportunities based on perceived value vs. costs	Cases
Support sellers / Give away the recipe and open a restaurant	Sale of services related to the product	GPL	Limited. Possible if it has a good reputation.	Cygnus Solutions, Red Hat
Loss leader / market positioner	Sale of other proprietary products	BSD or MPL	Possible.	Sendmail, Netscape
Widget frosting	Sale of hardware		Limited. The hardware pricing system is typically based on costs	Corel, VA Linux
Accessorizing	Sale of physical products (books, etc.)		Limited. Brand reputation can allow prices to be raised slightly	O’Reilly & Associates
Brand licensing	Sale of name rights		Limited. Typically based on income through trademarks.	Red Hat, -hypothetical-
Sell it, free it	As a cyclical “loss leader”	BSD or MPL	Possible until the product becomes an interchangeable asset (at which point, it is released)	-hypothetical-

In general we have decided to divide OSBM into six groups. The support seller business model is used when company promotes an open source product (which it has developed or in which participates actively) and sells services such as consulting or adaptation. The good example of

support seller business model is Red Hat. In the case of loss leader, the free program is used to somehow promote the sale of other proprietary products related to it or to prevent the monopoly. Netscape Communications released the source code to the web browser Mozilla free to prevent Microsoft to get monopoly on the web browser market and at the same time tried to gain more revenues from the Netscape web server by applying open source clients as a business strategy. The main business in the widget frosting business model is the sale of hardware. Using open source for the enabling software could increase hardware sale. Accessorizing business model is for companies which distribute books and other items. A good example of a company pursuing this model is O'Reilly & Associates which publishes books documenting and explaining various open software products, such as Linux. In the brand licensing model a company registers trademarks. Then it obtains income through licensing the use of those trademarks. Sell it, free it business model is similar to the loss leader model, but done in a cyclical fashion. First the product is marketed as free software. If it is relatively successful, the next version is distributed as proprietary software.

4 CASE STUDY – OPEN SOURCE BUSINESS MODEL CASE OF MOZILLA

The Mozilla project is managed by the Mozilla Foundation, a non-profit organization that creates free software and is dedicated to preserving choice, openness and promoting innovation on the internet. Mozilla's products are based on three basic principles: they must be free software, respect the standards and be portable to other platforms.

The history of Mozilla follows the history of world wide web. Around 1997, Netscape market share had dropped sharply due to the spread of Microsoft Internet Explorer. Frank Hecker proposed the best solution to solve the problem (Hecker, 1998). His solution was to release the source code of the browser and benefit from the effects of the free software community as described by Eric Raymond in "The Cathedral and the Bazaar". In January 1998, Netscape announced that it would publicly release the source code of its browser. That was the extremely important factor in the short history of free and open source software: A company was going to publish the whole source code of an application that had been a commercial product up until then, under a free software license. The date of launch was scheduled for the 31th March 1998. The free open source licenses existing at that time did not convince the Netscape executives. At first they created Netscape Public License (NPL). A license that was based on the basic principles of open source software licenses, but also gave certain additional rights to Netscape inc. When the draft of the NPL was published for public discussion, the clause providing additional rights was criticized. Netscape decided to create additional license MPL also known as Mozilla Public License, which was identical to the NPL, except that Netscape had no additional rights. Currently Mozilla accepts contributions under three licenses: MPL, GPL and LGPL. After several years of development Mozilla 1.0 was released in 2002. By 2002, well over 90% of Internet users were browsing with Internet Explorer.

On 15th July 2003 announced that it was no longer going actively take care of the Mozilla project. Netscape approved the creation of the Mozilla Foundation and added the two million dollars contribution. Firefox 1.0 was released in 2004 and became a big success. In 2008, Firefox reached 20% worldwide market share and renewed competition between browsers.

The business model used by Mozilla is unique, but we can still find some common points with business models described in this paper. Mozilla's business model is a mixture of loss leader, accessorizing and brand OSBM. As we mentioned before the loss leader business model is used to prevent the monopoly. Netscape released the source code to prevent Microsoft to get monopoly on the web browser market. Mozilla also uses accessorized business model by selling T-shirts, gear, outwear and other merchandise. Accessories mostly have Mozilla or Firefox trademarks. So we could also say that Mozilla uses brand licensing. With a combination of accessorizing and brand business model Mozilla obtains income from merchandise sale. Mozilla does not sale hardware or any services for product.

Hacker said: “Making profit requires selecting a suitable business model and executing it well” (Hacker, 1998). From Mozilla’s consolidated financial statement we can see that Mozilla’s consolidated reported revenues in 2009 were 104 million dollars. That is 34% more than in 2008 when reported revenue was 78 million dollars. The majority of Mozilla revenue continues to be generated from organizations such as Google, Yahoo, Yandex, Amazon, eBay and others. Mozilla consolidated expenses for 2009 were 61 million dollars, up approximately 26% from 2008 expenses of 49 million. It crucial to mention that operating expenses in 2009 continued to remain highly focused on people and infrastructure. In 2009 Mozilla was funding approximately 250 people working around the world. Total nonprofit grants, community donations and contributions in 2009 were around 1 million dollar. It is not really clear whether Mozilla gets revenue from any other sources. Almost all of Mozilla revenue has come from revenue sharing with search providers in the search dropdown and powering the start page of Firefox. Google accounts for most of that, almost 90% of Mozilla’s income. Revenue also includes search revenue shares from Yahoo and Yandex, plus some e-commerce affiliate revenue from Amazon, eBay and others. The deal between Google and Mozilla, that the default search engine of Firefox would be Google, was first agreed in 2006. The deal will expire in November 2011. It will be interesting to note if it would be renewed or not. Google now has own browser named Chrome. So would it be wise to continue fund its own biggest competitor. It’s true that Mozilla strongly relies on Google, but that could also change in the future. If Google decides to stop funding Mozilla, Microsoft would probably decide to step in. That would mean that Bing would become the default search engine in Firefox. Almost overnight Google would lose millions of its users and Microsoft’s Bing would eat into the market share. On the other side we can’t forget that Google is completely reliant on search traffic. Google has 8.58 billion revenue earned in the first quarter of 2011, 97% of it is derived from advertising. Mozilla Firefox has approximately 450 million users worldwide. Google’s status as the default search engine for the Firefox users directly translates into millions or possibly billions of dollars of revenue for Google. As Mitchell Baker, Chairperson of the Mozilla Foundation said “We are fortunate in that the search feature in Firefox is both appreciated by our users and generates revenue in the tens of millions of dollars”. Mitchell also adds, “Perhaps search is the only feature that will both benefit users and generate this kind of revenue”.

5 DISCUSSION

Mozilla has a unique business model which is based on open source. While it’s true that Mozilla strongly relies on Google, we can also claim that Google is relying on Mozilla. As provided from the data, Firefox belong to one of the cheapest traffic source for Google. In this sense Mozilla has built a reliable OSBM that generates main revenue from search engine traffic trough its browser. However this may end in November 2011 when contract with Google will expire. If Google fails to renew contract with Mozilla, there is possible threat for Google that Microsoft could sign a contract and so approach his Bing engine to majority share of approximately 450 million Firefox users. In this case we could talk even about “monumental shift” that could potentially redefine the web. If so, the world could get a second search engine that might be able to stand up to the overwhelming force of Google’s web supremacy.

In 2003 Mozilla started to reinvent the web. Five years later they have significant influenced on Internet Explorer’s monopoly. In 2011 the history might repeat, however this time this might happen to monopoly of Google.

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