Open Source Software and International Outsourcing

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INTRODUCTION

The popularity of open source software (OSS) has exploded among consumers and software developers. For example, today, the most popular Web server on the Internet is Apache, an open source product. Additionally, Linux (often considered one of the perfect examples of OSS) is now contesting Microsoft's dominance over the operating system market. OSS' flexibility, moreover, has allowed it to become a key international technology that could affect developments in global business practices. Despite these beneficial aspects, there are those who would claim it is difficult to implement and its core developers are undependable hobbyists. The purpose of this paper is to provide the reader with an overview of what OSS is, to present some of the benefits and limitations of using OSS, and to examine how international growth in OSS use could affect future business practices. By understanding these factors, readers will gain a better understanding of it and how OSS can be integrated into their organizational computing activities.

BACKGROUND

The driving force behind OSS is the Open Source movement, which can best be understood by what it opposes (proprietary software) and also what it supports (open software development). OSS advocates believe in an open exchange of ideas, an open coordination if not merging of different software, and, at the most crucial and basic level, an open access to the source code of software. In fact, Open Source creator Bruce Perens refers to it as a "bill of rights for the computer user" (Perens, 1999, p.171). Perens helped found the Open Source Initiative (OSI) in 1999, and only those software licenses that adhere to the guidelines of the OSI Open Source definition can use the trademark. OSI also maintains the Open Source definition and its registered trademark, and it campaigns actively for the Open Source movement and strict adherence to its definition.

The entire OSI Open Source definition can be viewed online at http://www.opensource.org/docs/definition.php. Its key tenets, however, can be summarized here: for a software license to be considered Open Source, users must have the right to make and even give away copies of the software for free. Additionally, and perhaps most importantly, OSS users must have the right both to view and to repair or modify the source code of the software they are using (Perens, 1999).

To appreciate the benefits and the limitations of OSS, one also must understand how it differs from proprietary software. In essence, the distinction has to do with differences in source code—the computer programming that tells software how to perform different activities or tasks. The motivation for this difference has to do with profits.

Proprietary software companies close access to the source code of their applications, because they consider it intellectual property critical to their business infrastructure. That is, once the programming of a software product is complete, these companies perform one final step, which is to prevent users from being able to see or to access the actual computer coding/programming that allows the software to operate. If any user could change the source code of the software, there eventually could be many different versions of it not easily supported by computers. If the user who purchased the software could change the source code, the user would not need to pay the software company to make the change. With unrestricted access to the source code, a user even could develop another version of the software and then distribute it either at a lower cost or for free (Nadan, 2002).

According to the OSS model, the profitability of the software itself is not important. This is not to say that some OSS companies do not make money, for many do profit from providing services or support to users. The RedHat company (http://www.redhat.com), for example, makes a decent profit packaging and distributing Linux to users. While any user can download and install Linux for free, RedHat has convinced many users that by paying a fee to RedHat, they will get a guaranteed, ready-to-go version of Linux that comes with experienced support, such as training, manuals, or customer service (Young, 1999).

Additionally, OSS source code is not the intellectual property of one company or one programmer. Rather, it is more like community property that belongs to every user. With barriers removed as to who can access it and who cannot, the thinking behind this key Open Source tenet is that the more individuals who look at and modify the source code, the better that code will become. More bugs will be caught, more enhancements will be added, and the product will improve more quickly, as the experience and talents of a large community of developers is put to work making it better (Raymond, 1999).

This approach to software development and distribution has successfully threatened proprietary software's hold over the market in recent years. Although this OSS model seems revolutionary, it is actually the way things are done, according to Alan Cox, "in almost all serious grown up industry" (Cox, 2003, para. 11). In every field, consumers can go elsewhere if vendors are not supportive. In the auto industry, for example, individuals can choose the car they want from the dealer they want; they can look for the best deal, and they can even save money by fixing the car themselves (Cox, 2003). Because of OSS, software consumers now have that same sort of power. Instead of just one choice, one kind of license, and one price, consumers now have a choice of brand names, a chance to test multiple products for the right fit and buy, and, ultimately, the right to tinker with the software's source code on their own to make it work for their needs (Cox, 2003).

Just as Open Source wants to contribute to the public good, it also wants to put a flexible, more practical face on free software. Faced with losing the war for the hearts and minds of software users, the Open Source movement sacrifices the religious zeal of copyleft (preventing makers or modifiers of OSS from claiming ownership of and control over that programming) for a software certifying system that enables more software companies to license their work as Open Source (i.e., leaving the source code of their applications available and modifiable). In other words, OSI does not see itself in an antagonistic relationship with the software industry. Rather, "commercial software… [is] an ally to help spread the use of Open Source licensing" (Nadan, 2002, "The free/open source movement," para. 5).

To facilitate this relationship, OSI argues that business has much to gain from OSS. Business can, for example, outsource work to OSS developers and thus save money on in-house development. Additionally, a small business quickly can become the next Linux by interesting OSS developers in a project it has begun (Nadan, 2002). Almost overnight, scores of developers around the world could be working for free to make the project a reality.

Open Source, therefore, is about the true believers in free software trying to convince individuals in business to be believers, too. Why do they want business to use OSS? Because innovation, research, and development of software, once found primarily at big universities, is now carried out primarily in business. If business adopts OSS, its popularity not only will increase, but its quality will improve as more dollars and developers become dedicated to improving it. The question then becomes, How does one know if OSS is the right choice for his or her organization? To make an informed decision related to OSS, one needs to understand the benefits and the limitations of such programming.

MAIN FOCUS OF THE ARTICLE

Despite the inroads OSS has made in operating systems and Web servers, many businesspersons are still standoffish toward it. Others, having heard positive and negatives stories about OSS, are curious about what it can really do in comparison to proprietary software. By examining the strengths