Revolution of Open Source Software

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Introduction: Who would want to pay for software when they can get it for free? No, my paper is not about software piracy or how to pirate software. The ever popular software Microsoft Office for example costs $150.00 at amazon.com compare to open source OpenOffice.org which anyone can get for a price of free! The free, fully featured, open source, OpenOffice.org suite does the same basic things as Microsoft Office Suite. So what is open source software? Open source software is software in which the source code is available freely to the public for redistribution, examination, modification or any other purposes. My goal in this paper is to point out the advantages and disadvantages of open source software and why open source software is today's revolution.

Brief History: The history of open source software is among the longest in terms of time period the history of software. In fact, in the beginning there was only free open source software. Later proprietary software was born and dominated software industry until recently. According to Jesús M. González-Barahona's document, in the 1960's IBM's first large-scale commercial computers were open source, in a sense that it could be freely shared and modified among its users (Jesus, 2000). However in mid- 1970's IBM's policy was changed and users were not allowed to see or redistribute the source code (Jesus, 2000). Same trend continued during 1970's and 80s when software developers closed off their software source code from users. At early 1985 Richard Stallman, a formal programmer at MIT lap resigned and launched the GNU project and Free Software Foundation which promoted the production of more free and open source software (Wheeler, 2007). During Early 1990's open source software were developing in several isolated groups because of the limitation in communication. The growth of open source slowly accelerated during 1990's because of USENET and the internet that helped coordinate transitional efforts and build up user communities (Jesus, 2000). The late 1990's open source

system based on GNU and Linux gained public acceptance and became alternative to proprietary systems. During 2002 Mozilla Firefox browser and OpenOffice.org office suite were announced. During late 2003 open source operating system, Android Inc., was found which right now is owned by Google and the leading software in portable devices (Markoff, 2007).

Advantages: The most notable advantage of any open source software is the cost. All open source software cost lot less, if not free then closed source proprietary software. Unlike other types of software open source software gives pure freedom to its users.

Just because Open Source software are free doesn't mean it is not as good as the similar paid software. Though proprietary software industries doesn't like open source software because it takes away their profit, even they sometimes use open source software for their software development. Microsoft, the largest software industry, uses Open-Source software for development according to Wheeler's paper (Wheeler, 2007). In fact the most popular IDE, the software that's used application development, such as NetBeans and Eclipse are open source which are used widely by both paid and free software developers (Kerner, 2006).

Software programmers not only benefits from using free open source IDEs but gives a wealth of experience for free. Open source projects are sometimes run by community or "forum" and experienced community member usually shares their knowledge. According to survey done on SourceForge, one of the largest open source software community, 29% of open source software community are there for the soul purpose of learning and 25% for work needs and professional status (Wheeler, 2007). In terms of experience open source software developers have average of impressive 11 years of experience and average age of only of 28 (Wheeler, 2007). From my personal experience, I learned java without any school knowledge of

programing from how installs IDE to write programs on android platform from an open source software community. Even just by looking at the source code of a program has helped me to write complex program code in an hour, which that would take me months if I had learned from the books.

Open source software should be the only way software is developed because of cost, reliability and security. In the past open source software development has helped produce high quality and reliable software quickly and inexpensively for industries including in health industry (Reynolds, 2011). Wheeler suggested in his research that since open source software are product of diverse collaboration with different experience, it is flexible and more reliable (Wheeler, 2007). Also collaboration in development of open source results in more secure software. As more minds are involved in finding all the little loop holes in the software. Android OS for example took advantage of open source software development and became leading operating system in portable devices as of now (Kerner, 2006). Open source software development is the "way to go" for future software development.

Open source is a gift that keeps on giving to everyone. Open source software not only gives benefits to its users but also the rival software industries. Today it is possible to pirate almost any software someone if has basic knowledge of how to search the internet. The number one reason why people pirate software is because it costs money. In my opinion a very few people would download pirated 3 GB version of Microsoft office 2010 for hours with risk of having virus, spyware, worm and chance that this version doesn't even work, when instead they can get OpenOffice.org for free. Since Open source software gives users alternative choices for free it should reduce, if not, stop software piracy.

Disadvantages: While the users of the Open Source software get countless benefits, Open Source software ironically harms software industry and it self. Since many of open source software relies on donation rather than selling the software for cost, they may not always generate the operating cost. Also by providing free alternative source of software it's harming the interchangeable proprietary software. According to research done by Standish Group, open source software is costing proprietary software industry by about $60 billion per year which is about 6% of worlds software market (Rothwell, 2008). This is most likely to increase in future considering the rate of growth mentioned in Wheeler's paper (Wheeler, 2007).

Security concerns: Another disadvantage of open source software is the free distribution right. Since open source software is easily modifiable, anyone with programing knowledge could legally modify and distribute the program after adding virus, key loggers, worms and any other malware.

In addition to the security concerns, open source software isn't always supported. Most of the time no one is actually responsible for updating or maintaining the software, though the community based open sources are supported by the community. So if something goes wrong, users are pretty much on their own.

Conclusion: Since the invention of the software open source and free software existed. However the term, Open Source Software, has evolved and open source software has revolutionized. Many of the popular software today are open source including Firefox, Linux OS, OpenOffice.org and, most popular portable device OS, Android ((Blackadder, 2009) and (Markoff, 2007)). What sets free and open source software apart is that users can see and modify program code giving users the opportunity to use, learn, distribute, and sometimes make profit

by selling software. Just because open source software are free doesn't mean it's not better then proprietary paid software by any means and sometimes it's better in terms of community support and security. Though open source software is free and gives user many benefits, ironically, it comes with the cost of Software industry itself. Open Source software takes away profit from the software industry. In many cases open source software relies on donation and community support from its users which sometimes aren't so reliable. Aside from that, not all open source software aren't supported nor maintained by anyone. Since distributer of the software can modify the code, users of the software may be fooled into using software that actually contains virus, spyware, and other privacy and security concerns.

While open source software is the free source of computer software and the development community is a wealth of resource, it does have negative side of harming software industry. Though open source software has its advantages and disadvantages, compare to harm, benefits are far more superior. The users of open source software should donate to the organization considering that open source software is highly depended on donation. By ignoring the harms open source software is truly today's revolution. Today's generation of programmers and anyone involving in IT should try to contribute to the open source community by donating and participating in development of open source software.

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(*Derek Blackadder is a national representative with the Canadian Union of Public Employees and senior Canadian correspondent for LabourStart.org. He states the advantages and disadvantages of open source software by pointing out the difference between Firefox vs Microsoft's software and Facebook vs Unionbook.)*

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(The author, Jesús M. González-Barahona, is currently researching and teaching in Universidad Rey Juan Carlos de Madrid. He has a PhD. in Telecommunications and experience in working for the industry. The document itself is backed up by multiple creditable sources.)

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believe is reliable.)

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(David A. Wheeler, a professor in Department of Computer Science at GMU, gave in depth details on the advantages on Open Source software supported by statistics and market studies.)