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Position Paper on

Open versus Closed Source

-Amateurs View

The first time I was asked to compare open source to closed source software I voiced my opinion favoring the closed source. The reasons are intuitive. First thought: well phrased by Eric Raymond "To many eyes, all bugs are shallow". Also, being an undergraduate student in computer science I know little more than I did as a freshman. As a student, it's nice to be able to access the source code and figure out what was initially in the "black box".

Security classes have led to the knowledge of vulnerabilities, and it is fun trying software, which I can simply download, maybe test and use. As is well known, no student would spend money on software, equivalent of which is freely available and promises to be of the same quality, if not better. I think for our research we do need to try lots of different non-traditional techniques thus requiring different types of software. Having to pay for something, which might not be used later, is probably not worth it. Also the way our education is set up, using Linux for instance, is a good thing for a beginner in Computer Science since it makes one understand more what normally magically happens on its own and gives a better control. This could be preferred or not and I think it depends on the application and the interests of the person. Other than anything to do with

programming, I still prefer using Windows, which has so many other applications that I don't want to spend time learning, and it is so convenient to simply use it. Therefore having both Windows and Linux in one machine is a typical thing anyone would do in my situation. Its good but both can be so much better, if there was something with a mixture of the two things together. I think there is a similar situation with the open and closed source software.

A brief study in the area of closed and open source software, I have realized several key issues underlying the whole debate of one against the other. I never got into the general trend of OS preference, since none of them are perfect. Being a beginner in programming I have been exposed to the open source community, but realized there are many strong points about closed source, which are ignored normally. The most important being the security issues. I think closed software with full time people focused on improving and testing the security issues can be more reliable than volunteers in open source, where things rely on probability. On the other had the former has deadlines to meet, and therefore there could be compromises made even on important factors like this one. Thus it is very hard to give an opinion favoring either side when it comes to security assurance.

As programmers we love trying something innovative all the time. Positives of open source are learning and trying new software. With the details available, locating vulnerabilities can be easier than testing randomly. Mostly the software is supposed to be written well, but one would agree when I say that there is always a good chance to find glitches in them. Thus problems could be fixed with many users being able to look at it. The downside of this is the one could use this vulnerability to her advantage, especially if she had an ulterior motive behind it or to show off her code breaking abilities to friends. Thus giving importance to computer ethics might be helpful in the long run. This could also

happen in closed source software. I think companies that give their software for beta testing give good incentives, which can prevent misuse of vulnerabilities found by the tester. Some studies have shown that ultimately the amount of security offered by both closed and open seems to be the same. Although I feel having an open source could be useful for seeing future vulnerabilities to both the attacker and the user/programmer.

Talking about innovation, I think closed source is the only way how a stand-alone programmer could make her mark in the world. A thing like protecting the intellectual property and getting patented is important. Chance to gain profit with the idea, provides the motivation and opportunity to improve it. That way she can also be liable for the software. If this is a company, similar advantages hold and it can invest on creating new software. These closed source programmers in a sense could be more seriously dedicated and have a stronger basis since they are being supported financially. There is a huge part of society which simply needs to use the products and is willing to pay for it, and especially its customer support. Real engineering does need a good well-defined structure to it, which happens in the case of a proper company.

On the other hand, even if open source has been there for more than 20 years it is a paradigm towards advent of new software development. With an idea being published, and as many people working on it from different angles all around the world, it is bound to achieve high standards. Collaboration of the kind, which exists currently, can cure and improve on the software well known to people. Copyrighting is not a concern in this case, which relieves some security issues. Security by obscurity has proven to be a bad idea in the past. At the same time I still believe new ideas deserve to be closed source, for it to sell and be recognized for its worth. Having a good healthy competition is probably an ideal for any growing technology.

I think there is some balance that one could reach in this debate between open and closed source. If software engineering suggests monopolizing everything to one kind of system, I think it would leave no room to breathe for those who don't mean any harm but are trying something new. Maybe there are different levels of security required in the computer society, which comprises of no one country or type of people, but the whole world. Illegal copying of the CD's should definitely be prevented but not at the cost of young programmers having fewer resources. I suggest parallel working of both open and closed source to provide software which is reliable and secure should be the basis to build on.

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