Case Study Research Assignment

Proprietary software vs. Open source software

Course: Program Design Methods

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I. Background Information

Open-source is a type of licensing agreement that allows users to freely modify a work, use said work in new ways, integrate the work into a larger project or derive a new work based on the original. Examples of open-source products are Linux and Android.

Proprietary software, like Microsoft Windows or macOS, has set restrictions on use and can be very expensive, whereas open source software is freely available to use as is or to change, improve, and redistribute. Open source software has become acceptable as a cost-effective alternative to proprietary software.

II. The Problem

The problem for this case study is to determine which is the best choice between proprietary software and open source software. Through this case study, we will be outlining the positives and negatives surrounding both models.

III. Short Literature Review

On the topic of open-source software versus proprietary software, there has been research done by Dalle et.al. (2002) that states that in some cases, open-source software can outperform proprietary software. This, however, is not always the case. Their research shows that open-source software success is heavily reliant on internal (organizational efficiency) and external (public support and competitiveness in the market with existing proprietary standards) factors. Although the openness of the sources determines the foundations of this structure, it also relies on the developer community and internal organization. Finally, a hybridization between an open-source and proprietary product, like Linux and Windows, could play a part in increasing open-source development efforts.

From this, we conclude that the success of open-source and proprietary software are heavily reliant on how their respective parties manage it and that it is still an open question on whether one is better than the other.

IV. Findings and Discussions

Open-Source Proponent

The term open-source is closely related to open-source software (OSS). Open-source software is a type of computer software that is released under a license, but the source code is made available to all the users. The copyright holders of such software allow the users to use it and do some valuable modifications in its source code to add some new features, to improve the existing features, and to fix bugs if there are any. Because of this reason only open-source software is mostly developed collaboratively.

Ø **Benefits of Open-source contributions :**

- We code for real-world open-source projects.
- It refines our existing knowledge of programming and also helps us to learn new skills.
- Many open-source projects offer mentorship programs to guide and help us through our first few contributions.

- We need not develop the whole thing from scratch, we just have to fork our favorite projects and start experimenting with them.
- After making any open-source contribution, we get immediate feedback regarding our developmental work.

Ø **Disadvantages of open source**

- The difficulty of use - Some may lack user-friendly interfaces or features, which can affect productivity and prevent users from adopting or using programs with ease.
- Compatibility issues - Many types of proprietary hardware need specialised drivers to run open source programs, potentially adding to your expenses. Even if an open-source driver exists, it may not work with your software as well as the proprietary driver.
- Liabilities and warranties - With proprietary software, the developer usually provides indemnification and warranty as part of a standard licence agreement.
- Hidden costs - Software that is free up-front but later costs money to run can be a major burden, especially when not considering hidden costs from the outset.

Last but not least, why do we have to choose open source software? There are 5 main reasons why OSS is the best choice. The biggest advantage is that open-source software is usually free. Second, Open-source software is open to the world. Everyone can go to a website and download the source code for a piece of open-source software. That means that you don't have to worry about security issues because many people have looked at it before. Third, Since you have access to the source code, you can integrate open-source software quite easily compared to commercial software. With commercial software, you would have to go to the developer and request an integration to be developed.

The next one is the quality. The thing that makes open-source software solutions better than the alternative is the number of eyes looking at them.. The last reason is availability of source code. We have access to the complete program with open source. We can download the code and build the software yourself. We can also take it and change it around to suit your specific needs. Ultimately, it gives us a lower cost of ownership, and it helps us learn about how certain things are implemented. Those lessons could help us build better software in the future.

Proprietary Developer

What is proprietary software?

Proprietary software, also known as closed source software or commercial software, is a software that legally remains as property of the developer party, thereby bears limits against use, distribution and modification, unless otherwise stated in the End User License Agreement during installation.

Features of proprietary software

- Source code is kept away from users due to intellectual property rights
- Only developer has control over its development
- Use and distribution comes with a cost bared by the user, in other words product is created for profit

Examples of proprietary software include:

- System software:

  Windows and OS X operating systems

- Application software:

  Microsoft Office suite, Adobe Creative Suite productivity software, login music creation software, paid-for games for consoles.

Benefits of proprietary software

The stakeholders discussed: developers, end user

- For the company or individual developer, licensing of computer software provided an alternative business model to monetize computer products.
- Proprietary software tends to be designed with the user in mind, in order to maximize profits, meaning that the interfaces are usually simple to use and include the features that users need/want.
- The product rarely has bugs as end users get the best for what they pay for. Any existing bugs will be fixed in updates known as patches, which are often provided free of charge.
- End users can seek help Help from the developer company, usually with a '?' button, if problems occur.
- Feature updates which extend the software's facilities are often available, although usually at a cost.

  For example, The Sims 4 Game Packs, Extension Packs, Stuff Packs improve the gameplay by adding more content with a small fee (Ranking the best sims 4 expansion packs you can buy, 2021).

Drawbacks of proprietary software

- Initial or ongoing cost for subscription to use the software

  For example, Subscription to Adobe Creative Cloud, includes Adobe Photoshop, Adobe Illustrator costs $69.72, a month (Adobe premiere pro, n.d.).

- Software cannot be adapted to meet the needs of the user as they do not have access to its source code.
- It can be limited to a single computer or network, so unless the license allows it, a user cannot redistribute the software.

  For example, Microsoft offers their software for 1x purchase for 1 device (Pengunduhan & Harga, n.d.)

- Software updates can take time as only a single party is working on it, leading to over-reliance on developers.

Proprietary software has plenty of benefits, including technical support, usability and functionality, making it a popular choice amongst both individuals and businesses. However, it's also important to note that there are some disadvantages of using proprietary software, and these should be carefully weighed up before making a decision as to the best type of software to choose.

Arbitrator

As the arbitrator, I am tasked with promoting dialogue between the two parties in order to reach an agreement. With that in mind, I will start this discussion with the results of my research concerning types of software in general. Most software falls under proprietary software, and OSS (Open-Source Software) (*Software Licenses.* 2020).

From the perspective of a user, it is easy to assume that OSS is the more convenient and accessible option. However, it is not as clear cut as that. In fact, there are some things to consider, like quality, longevity, and the support provided by the product's provider.

Except for Commercial Open-Source Software (COSS), which has a single entity owning the rights, OSS is open and free for anyone to contribute, fork, or use. This lack of protection can lead to problems like the Streamlabs controversy. Where consumers can be misled and confused, just because of the gray area of trademarks and copyright it is in.

According to an article by Diaz (2021), it started from a post by the Lighstream twitter account comparing the strikingly identical Streamlab website layout to the Lighstream website, down to user reviews, photos, and layout. In addition, the OBS twitter account claimed that Streamlabs had used the OBS name without their consent.

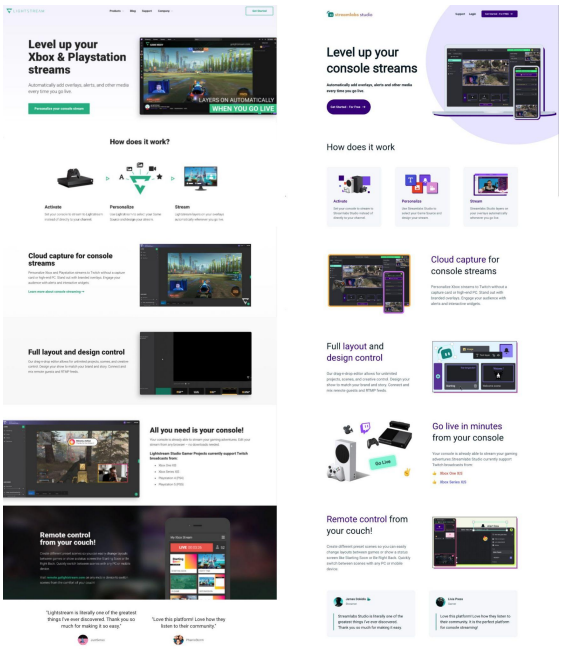

Figure 1: Comparison of Lightstream (left) and Streamlabs (right) website

Most consumers who purchase proprietary software do so with the anticipation of receiving the greatest possible experience. This view stems from statistics that show that most proprietary software is owned and generated by larger corporate entities, such as Microsoft.

From a consumer's perspective, proprietary software has the advantage of originating from a reputable and well-known corporation, such as Microsoft or Apple. Consumers find proprietary software appealing because of its brand recognition and dependability, but it comes at a cost. Adopting a proprietary software model will be a significant financial investment for developers, but if it succeeds, it can become a standard in the industry and profitable.

Though open-source software is shown to be gaining more traction nowadays, with most consumers under the assumption that open-source software is better than their proprietary counterparts, "neither business model can be said to be the absolute best and most businesses can be successful with either or utilizing both approaches simultaneously" (Optimus Information, n.d.). It boils down to your own principles, philosophies, and viewpoints.

V. Conclusion and Recommendation

After debating and analyzing the facts and data collected from our research, our team has concluded that Open Source Software is the greatest option for users (OSS). The open-source model, according to the open-source proponent, is more appealing to a user because of its reduced cost, code transparency, and collaborative environment.

Overall, the creator's needs, product scenario, and desire will determine whether or not to choose either business model. Developers should establish and analyze their product's and target audience's needs, as well as what they are comfortable with. Then, to establish the best environment for developing and marketing their product, they should determine which business model(s) corresponds with their data and findings.

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