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Assignment name: Individual Report

Tutorial time: _____

Tutor name: _____

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INFO5992 Individual Report

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Introduction

Nowadays, “open source” has been one of the most important way to have the innovation. For example, Microsoft made its “.NET Framework” as open source project. Google made “TensorFlow” as an open source software library for machine learning. With “open source”, the companies should work with the communities together. In this essay, I will examine how companies have innovations with the help of communities and the relationship between the communities and the companies’ business models.

Innovation Topic and Theories

To have innovations, also to make more profit with “open source software”, companies should always work on the open source project together with the communities. So how to effectively communicate with the community and get useful information is very important. The theory inside the relationship between the companies and the communities can be divided into three parts: (1) Accessing; (2) Aligning; and (3) Assimilating (Dahlander, &

Magnusson, 2008).

	Accessing	Aligning	Assimilating
Method 1	Establishing new community	Applying licensing practices to expound ownership	Putting effort to assess and select source code from communities
Method 2	Using existing communities	Affecting research direction of the community	Giving back non-strategic source code written by the company to communities

Table.1, Theories Summary (created by Yuming JIANG for INFO5992)

Accessing – New community or existing community

When companies decide to make their software as "open source software", they should have a community to develop this software together. So, when accessing the "open source software" field, the first question is whether to establish totally new communities or just identify and use existing communities (Dahlander, & Magnusson, 2008).

Aligning – Strategy difference between company and community

Typically, companies and communities have different motives,

Companies need to make profit, and for the most of time, want to prohibit competitors from utilizing the product. While community members need source code to stay free and openly accessible (Dahlander, & Magnusson, 2008). Because of this difference, the information got from the community may can not help the company to have the innovation. To align the company and community strategies, two tactics are found: (1) applying licensing practices to expound ownership; and (2) affecting research direction of the community (Dahlander, & Magnusson, 2008).

Assimilating – Get information and evolve the software

The company should transfer the information got from community into real product. There are two methods that company can integrate the communities' effort into its product and share the result with the community: (1) putting effort to assess and select source code from communities; and (2) giving back non-strategic source code written by the company to communities (Dahlander, & Magnusson, 2008). After integrating communities' innovation into companies' own software, companies can make profits with the method of re-packaging,

supporting, providing services and embedding complementary proprietary software in hardware products (Bonaccorsi, Giannangeli, & Rossi, 2006).

Case Studies

Background

MySQL

MySQL is an open source relational database management system. MySQL was firstly released by MySQL AB. In 2008, MySQL AB was acquired by Sun Microsystems. In 2010, Sun was acquired by Oracle Corporation. Nowadays, MySQL is one of the most successful “open source” projects.

ThinLinc

Cendio’s most famous product is ThinLinc, a cross-platform remote desktop server. A lot of components included in ThinLinc are related to “open source” projects, for example, TigerVNC, rdesktop, OpenSSH, and PulseAudio ("Open Source License

Usage Summary | ThinLinc by Cendio", 2017). Typically, Cendio is the main driven force in these “open source” projects.

Discussion

Difference between MySQL and ThinLinc

For accessing part, MySQL established its own community. Cendio used existing communities. For aligning part, MySQL can influence the development tasks of the community with all of the two methods. Cendio had limited possibilities to influence the communities. For assimilating part, MySQL mainly gave the selected source code back to the community. Cendio mainly put effort to assess and select source code from communities. Details will be explained in the following essay.

	Accessing	Aligning	Assimilating
MySQL	Method 1	Both methods	Method 2
Cendio	Method 2	None	Method 1

Table.2, Examples difference summary (created by Yuming JIANG for INFO5992)

MySQL

Accessing

For accessing the “open source software” field, MySQL established its own community. With establishing this new community, MySQL pulled in a lot of outsiders to deal with the company's software. The small or start-up market was also changed to a mass one quickly. The software had the increase on brand recognition. MySQL also acquired more control on how will the community will develop. On the other hand, it took a lot of money to build and have the maintenance of this totally new community. And a lot of other companies also established their own communities to compete with MySQL’s new community.

Aligning

As MySQL established its own community, it was easy to influence the development direction of the community. Actually, MySQL used all of the two methods in aligning part. With applying licensing practices to expound ownership, MySQL used licenses to avoid copyright issues for company’s own items and items that integrated source code written by other community members. The licenses became the foundation of the cooperation

between the company and the community and helped MySQL evade direct clash with community members. On the other hand, if the company made its own item too proprietary, the community members would be disappointed and left the community. MySQL firstly used a Lesser General Public License, and this license did not work very well. In this situation, MySQL moved away to a dual licensing model which includes two license: (1) a firm-specific commercial license; and (2) the ordinary GPL. So, it is hard to find the correct license to use because of the time consuming for analyzing licenses' legal outcome.

With affecting research direction of the community, MySQL prepared some prizes and awards for individuals in the community. So, the community focused on the work that benefit MySQL. With the prize, a lot of people participated in the development, new findings were produced rapidly. People in the community was also happy to test the software so that MySQL always got immediate feedback. However, even with the prize, some community members still did not work on tasks that they were uninterested in. Some community participants did not like the interference from the company and then left the community.

Assimilating

For Assimilating, MySQL mainly gave back non-strategic source code written by the company to communities, it made the community more active and sustainable development. However, if the released part was not selected carefully enough, the competitors can get the research information and strategy easily from the community.

ThinLinc

Accessing

For accessing the “open source software” field, Cendio identified and used existing communities, this meant that Cendio did not need to make the whole software from scratch. Cendio found the most successful “open source” projects and joined those communities. Cendio thought that it would be easy to jump to another projects and communities if the company changed its business model. However, this method made the company hard to influence the communities, so that Cendio could not get as much useful information as establishing new community. It also took Cendio significant effort to find those successful “open source”

projects.

Aligning

As Cendio used existed communities, the company did not have useful methods to influence the strategy of the community. Cendio evaluated a lot of "open source" projects and found whose developments can be used together with its self-developed source code.

Assimilating

For assimilating, Cendio mainly put effort to assess and select source code from communities, the acceptance of using communities' effort was increased among the employees of the company. Employees of the company also saved a lot of time on writing those new features from communities and could focus on bug hunting and efficiency tests. On the other hand, there should always be a huge amount of information in the communities, it was really difficult to distinguish the useful parts. Also, evaluating code from the community was also time consuming.

Conclusion

To have the innovation with “open source software”, it is important to build the right relation with the community. With the guiding of these three theories: (1) accessing; (2) aligning; and (3) assimilating, I think the company with “open source software” can build or find its own useful community, and therefore, become more competitive.

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