The Role of Open Internet Community for Finding Market Values of Software Inventions

Kazunori Fujimoto, Ph.D
Institute for Technology, Enterprise and Competitiveness, Doshisha University,
Karasuma, Imadegawa-dori, Kamigyo-ku, Kyoto, Japan
kfujimoto@doshisha-u.jp

Abstract. The research presented in this paper sheds light on the process of finding a new market value for software inventions in open internet communities. The technology transfer schemes, where software inventions are provided openly on web-sites, are classified into two types: program provision scheme and service provision scheme. By comparing these two schemes, the characteristics of service provision scheme are discussed from a viewpoint of capability to promote the opportunities for new license agreements of software inventions.

1 Introduction

It is often insufficient for a closed organization to explore market values of an invention because an invention has potentially vast amounts of business applications[1,2]. This difficulty is especially true in software inventions, which often have high versatility and generate wider applications. To explore and find new market values of inventions, some software technology firms set up a web-site which promotes the collaboration with external organizations, characterized by a different organizational culture and viewpoint. Although the websites have attracted attention as a framework for finding new market values of inventions, very little is known about the effective factors for the finding processes. This paper classified the technology transfer schemes, where software inventions are provided openly on web-sites, into two types: program provision scheme and service provision scheme. By comparing these two schemes, this paper discussed the characteristics of service provision scheme from a viewpoint of capability to promote the opportunities for new license agreements of software inventions.

2 Comparison

In program provision scheme, the software inventions are provided as computer programs on web-sites. Some web-sites such as alphaWorks1, by IBM, and alphaAvenue2, by Xerox, are categorized in this scheme. In service provision scheme, on the other hand, the inventions are provided as experimental services on the web-site. Some web-sites such as google labs3, by Google, and goo-lab4, by NTT Resonant, are categorized in this scheme.

1 URL: http://www.alphaworks.ibm.com/
2 URL: http://www.alphaavenue.com/
3 URL: http://labs.google.com/
4 URL: http://labs.goo.ne.jp/
Table 1. Comparison between two models

<table>
<thead>
<tr>
<th></th>
<th>Program Provision Model</th>
<th>Service Provision Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shape of inventions</strong></td>
<td>computer programs</td>
<td>experimental services</td>
</tr>
<tr>
<td><strong>Main users</strong></td>
<td>software developers</td>
<td>internet users</td>
</tr>
<tr>
<td><strong>Running costs of web-sites</strong></td>
<td>smaller</td>
<td>larger</td>
</tr>
<tr>
<td><strong>Candidate for licensees</strong></td>
<td>users</td>
<td>users and web-site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>managing companies</td>
</tr>
</tbody>
</table>

Table 1 shows the comparison between these two schemes in terms of (1) ways of providing software inventions on the web-site, (2) main users in the community constructed by the web-site, (3) costs in launching and maintaining the web-sites, and (4) candidate for entering into licensing agreements with the invention holders. In contrast with program provision scheme where software developers are the main users, service provision scheme involves broader kinds of users such as internet users including content providing companies. For that purpose, in service provision scheme, the inventions are provided not as computer programs but as experimental services that can be used directly through the Internet. For example, goo-lab provides an experimental service on the basis of InfoLead technology, which makes internet search results operate in three dimensional spaces. Internet users who are interested in such new technologies can use and enjoy them with web-browsers by accessing goo-lab site.

The running costs of web-sites for service provision scheme are greater than that for program provision scheme because a number of computational and human resources are required to provide experimental services in service provision scheme. Service provision scheme, however, has the advantage for invention holders of bringing chances of licenses not only to users but also to the web-site managing companies. The web-sites managing company of service provision scheme could have another original business model around internet users in addition to the technology transfer business. Google and NTT Resonant, which are the web-site managing companies of service provision scheme, indeed have an original business model namely portal-site business, where advertising revenue is raised on the basis of the access frequency. In terms of portal-site business, the experimental services in service provision scheme have two purposes: (1) making an appeal to internet users of advanced technologies and services, (2) selecting attractive inventions effective for the core portal services. The latter purpose means that service provision scheme promotes the opportunities for license agreements of software inventions with the web-site managing companies. Thus, service provision scheme is qualified as an expansive model of program provision scheme in the sense that it incorporates another business model such as portal-site business into technology transfer business. Service provision scheme has the potential of promoting the process of technology transfer of software inventions because it is managed through the values of two different business models.

3 Conclusion

In this paper, the technology transfer schemes, where software inventions are provided openly on web-sites, were classified into two types: program provision scheme and service provision scheme. By comparing these two schemes, it was pointed out that service provision scheme incorporates another business model such as portal-site business into technol-
ogy transfer business while program provision scheme works individually as technology transfer business. Service provision scheme has the potential of promoting technology transfer processes in different ways because it has the advantage for invention holders of bringing chances of licenses not only to users but also to the web-site managing companies. As the future work, critical factors which determine the efficiency in the service provision scheme should be explored so that software technology firms are able to choose the technology transfer strategies properly.

Acknowledgement

This research is supported by the 21st Century Centre of Excellence, Doshisha University.

References