Chapter 1.6
Open Source Software Evaluation

Karin van den Berg
FreelancePHP, The Netherlands

ABSTRACT

If a person or corporation decides to use open source software for a certain purpose, nowadays the choice in software is large and still growing. In order to choose the right software package for the intended purpose, one will need to have insight and evaluate the software package choices. This chapter provides an insight into open source software and its development to those who wish to evaluate it. Using existing literature on open source software evaluation, a list of nine evaluation criteria is derived including community, security, license, and documentation. In the second section, these criteria and their relevance for open source software evaluation are explained. Finally, the future of open source software evaluation is discussed.

INTRODUCTION

The open source software market is growing. Corporations large and small are investing in open source software. With this growth comes a need to evaluate this software. Enterprises need something substantial to base their decisions on when selecting a product. More and more literature is being written on the subject, and more will be written in the near future.

This chapter gives an overview of the available open source evaluation models and articles, which is compounded in a list of unique characteristics of open source. These characteristics can be used when evaluating this type of software. For a more in-depth review of this literature and the characteristics, as well as a case study using this information, see van den Berg (2005).

OPEN SOURCE SOFTWARE EVALUATION LITERATURE

The name already tells us something. Open source software is open—not only free to use but free to change. Developers are encouraged to participate in the software's community. Because of this unique process, the openness of it all, there is far more information available on an open source software package and its development process. This information can be used to get a well-rounded impression of the software. In this chapter we will see how this can be done.

Though the concept of open source (or free software) is hardly new, the software has only in recent years reached the general commercial and private user. The concept of open source evaluation is therefore still rather new. There are a few articles and models on the subject, however, which we will introduce here and discuss more thoroughly in the next section.

Open Source Maturity Models

Two maturity models have been developed specifically for open source software.

The first is the Capgemini Expert Letter open source maturity model (Duijnhouwer & Widdows, 2003). The model "allows you to determine if or which open source product is suitable using just seven clear steps." Duijnhouwer and Widdows first explain the usefulness of a maturity model, then discuss open source product indicators and use these in the model. The model steps start with product research and rough selection, then uses the product indicators to score the product and determine the importance of the indicators, combining these to make scorecards. Finally it ends with evaluation.

Second, there is the Navica open source maturity model, which is used in the book *Succeeding with Open Source* (Golden, 2005). This model uses six product elements in three phases: assessing element maturity, assigning weight factors, and calculating the product maturity score.

Open Source Software Evaluation Articles

Aside from the two models, a number of articles on open source software evaluation have been written.

Crowston et al. (2003) and Crowston, Annabi, Howison, and Masango (2004) have published articles in the process of researching open source software success factors. In these articles, they attempt to determine which factors contribute to the success of open source software packages.

Wheeler's (n.d.) *How to Evaluate Open Source/Free Software (OSS/FS) Programs* defines a number of criteria to use in the evaluation of open source software, as well as a description of the recommended process of evaluation. Wheeler continues to update this online article to include relevant new information.

Another article defining evaluation criteria for open source software is *Ten Rules for Evaluating Open Source Software* (Donham, 2004). This is a point-of-view paper from Collaborative Consulting, providing 10 guidelines for evaluating open source software.

Finally, Nijdam (2003), in a Dutch article entitled "Vijf Adviezen voor Selectie van OSS-Componenten" ("Five Recommendations for Selection of OSS Components"), gives recommendations based on his own experience with selecting an open source system.

Literature Summary

Table 1 summarizes the criteria derived from the literature mentioned in the previous two sections and how they are discussed.

EVALUATING OPEN SOURCE SOFTWARE

The open source software market is in some ways very different from the traditional software market. One of the differences is that there is an abundance of information available concerning the software and its development process that is in most cases not available for traditional software.

The evaluation of traditional software is usually focused on the functionality and license cost of the software. In the open source world, the