

# Chapter XLIII

## Open Source for Accounting and Enterprise Systems

**Thomas Tribunella**

*State University of New York at Oswego, USA*

**James Baroody**

*Rochester Institute of Technology, USA*

### ABSTRACT

*This chapter introduces open source software (OSS) for accounting and enterprise information systems. It covers the background, functions, maturity models, adoption issues, strategic considerations, and future trends for small accounting systems as well as large-scale enterprise systems. The authors hope that understanding OSS for financial applications will not only inform readers of how to better analyze accounting and enterprise information systems but will also assist in the understanding of relationships among the various functions.*

### INTRODUCTION

This chapter will inform the readers about the feasibility and potential applicability of open source software (OSS) to the functional areas of accounting and finance. Small and enterprise-scale systems will be examined. The chapter will review background information and frameworks for analyzing the business case related to financial applications of OSS.

OSS systems can provide support to individual business functions or integrated suites of functions. For example, open source enterprise systems provide an integrated set of business functions that are organized around business processes.

In this chapter, we will address the concerns of managers and educators who are interested in learning more about open source business systems. We studied available OSS accounting and financial applications by reviewing available documentation on Web sites. For a number of enterprise applications we reviewed, the system functionality and market positioning, downloaded the systems and studied system requirements, installed and set up the systems, and reviewed the license agreements. Initially, the chapter will review the current state of OSS business systems with a focus on definitions and functional applications of small accounting systems and larger enterprise systems. We will then address the

critical factors and decision frameworks relevant to the adoption OSS for accounting and financial applications. In addition, we will explore future trends in OSS financial reporting systems.

## **BACKGROUND OF OSS ACCOUNTING AND FINANCE APPLICATIONS**

In this section, we will discuss the business issues that are a required background in order to have a general understanding of accounting and financial applications with OSS. Open source is used to describe “a software program or set of software technologies that are made widely available by an individual or group in source code form for use, modification, and redistribution under a license agreement with having very few restrictions” (American Bar Association, 2006). The logic behind the open source philosophy is that users must be able to read, redistribute, and modify the source code for a piece of open source software. In contrast, a traditional software license is designed to protect the intellectual property of the software developer and severely restricts reading, redistributing, and modifying source code. Since an open source license gives broad rights to read, redistribute, and modify the source code for a piece of OSS, users constantly improve the OSS by adapting it to various applications and fixing bugs.

The intellectual and legal origin of most open source license agreements can be traced to two sources: the GNU General Public License (GPL) and the University of California BSD Unix license agreements (McGowan, 2001). These agreements reflect the goal of creating a community environment in which innovation and quality improvements are rapidly shared and distributed through common ownership of intellectual property rather than through individual or organizational ownerships through copyrights (Kennedy, 2001). Improvements made by individuals are made publicly available back to the community.

Statistics available from [www.freshmeat.net](http://www.freshmeat.net) (Freshmeat, 2006), a Web site described as one of the largest indexes of Unix and cross-platform OSS, indicates that these two license forms (or close revisions of them) account for almost 80% of the license agreements used by projects tracked on the site. Since 20% of the projects utilize different types of agreements, users must examine carefully the license agreement of the system they want to use.

We downloaded and reviewed the license agreements for a number of enterprise, accounting, and financial applications (see Tables 1 and 2). For this sample, The GNU General Public License was the most common agreement. It is important to note that as the target market for these systems moves toward large enterprises, commercial licenses and hosted licenses emerge (Tustena CRM, 2006). Given the variations of licensing agreements demonstrated in this sample, users must carefully compare the license agreement with the requirements of their organizations.

The trade press and other publications emphasize that OSS is about back-office technology such as servers and operating platforms. The relevance of OSS to functional areas, including accounting, finance and enterprise systems, is not well understood. Historically, OSS has focused on technology components such as the Linux operating system and the Apache Web server. Open source business applications are beginning to emerge, the most familiar being OpenOffice, an OSS application office suite supporting word processing, presentation, and spreadsheet applications. Now available as OSS is a variety of accounting, financial, and enterprise systems applications. Reflecting the potential these offerings have in the marketplace, venture capital is flowing into open source business applications, which be an indicator that these OSS business applications will play a significant role in the future (Cook, 2004; Marshall, 2005; Stein, 2005).

Finding operating systems and servers to support the various open source accounting and

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/open-source-accounting-enterprise-systems/21216](http://www.igi-global.com/chapter/open-source-accounting-enterprise-systems/21216)

## Related Content

---

### Open Source for Accounting and Enterprise Systems

Thomas Tribunella and James Baroody (2007). *Handbook of Research on Open Source Software: Technological, Economic, and Social Perspectives* (pp. 555-569).

[www.irma-international.org/chapter/open-source-accounting-enterprise-systems/21216](http://www.irma-international.org/chapter/open-source-accounting-enterprise-systems/21216)

### Organizational Influencers in Open-Source Software Projects

Roland Robert Schreiber (2023). *International Journal of Open Source Software and Processes* (pp. 1-20).

[www.irma-international.org/article/organizational-influencers-in-open-source-software-projects/318400](http://www.irma-international.org/article/organizational-influencers-in-open-source-software-projects/318400)

### Making Government Policies for Education Possible by Means of Open Source Technology: A Successful Case

Marcos Castilho, Marcos S. Sunye, Daniel Weingaerter, Luis C.E. de Bona, Fabiano. Silva, Alexandre Direne and Laura García (2007). *Open Source for Knowledge and Learning Management: Strategies Beyond Tools* (pp. 343-368).

[www.irma-international.org/chapter/making-government-policies-education-possible/27818](http://www.irma-international.org/chapter/making-government-policies-education-possible/27818)

### Will the Customer Survive or Not in the Organization?: A Perspective of Churn Prediction Using Supervised Learning

Neelamadhab Padhy, Sanskruti Panda and Jigyashu Suraj (2022). *International Journal of Open Source Software and Processes* (pp. 1-20).

[www.irma-international.org/article/will-the-customer-survive-or-not-in-the-organization/300753](http://www.irma-international.org/article/will-the-customer-survive-or-not-in-the-organization/300753)

### Enhancing the Software Clone Detection in BigCloneBench: A Neural Network Approach

Amandeep Kaur and Munish Saini (2021). *International Journal of Open Source Software and Processes* (pp. 17-31).

[www.irma-international.org/article/enhancing-the-software-clone-detection-in-bigclonebench/286650](http://www.irma-international.org/article/enhancing-the-software-clone-detection-in-bigclonebench/286650)