Chapter 1.7

Free and Open Source Enterprise Resources Planning

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ABSTRACT

This chapter introduces the key aspects of Free/ Open Source Enterprise Resources Planning systems (FOS-ERP). Starting by related work carried out by researchers and practitioners, it argues in favor of the growing acceptance of this category of enterprise systems while showing how this subject is not yet well explored, especially by researchers. The goals of this chapter are to highlight the differences between FOS-ERP and their proprietary equivalents (P-ERP) in terms of business models, selection, customization, and evolution; and showing the challenges and opportunities that they offer to adopters, vendors, researchers, and individual collaborators. Therefore, this chapter tries to broaden the discussion around the FOS-ERP subject, currently focused only in cost aspects, bringing more attention to other aspects and pointing out their innovative potential.

INTRODUCTION

Free/Open Source[1] ERP (FOS-ERP) systems are gaining a growing acceptance and consequently improving their market share. According to a recent market study, FOS-ERP related services would hit about US$ 36 billion by 2008 (LeClaire, 2006). The reasons for this phenomenon are basically two: lower costs and free access to application's source code. On the cost side, they impose reduced or no investment in licensing in general. On the access to code side stands the perception that if customization is inevitable, why not adopt a solution that exposes its code to the client company, which can freely

adapt the system to its needs? Maybe this second reason is more complex and much less studied and is addressed in many topics later in the chapter.

Given this raising on FOS-ERP deployment, and the relative small number of references to this subject, instead of simply comparing functionalities of various different solutions, this chapter aims to a) present tendencies on open source software in general and open source enterprise systems that directly influence on FOS-ERP, b) highlight the differences between FOS-ERP and proprietary ERP (P-ERP) in terms of business models, selection, customization and maintenance, and c) identify the challenges and opportunities that they offer to stakeholders and developer communities.

RELATED WORK

While increasing in market importance, FOS-ERP is still poorly analyzed by academy, where large quantities of articles put their research efforts on P-ERP deployment, project management, and economic aspects (Botta-Genoulaz, Millet & Grabot, 2005). Research on FOS-ERP software is rather deficient, and, therefore, a series of relevant aspects of FOS-ERP, which differentiate them from P-ERP, are still not well understood. As an example of this situation, a research conducted on the FOS-ERP evaluation subject, has shown how evaluating FOS-ERP brings more concerns than evaluating P-ERP (De Carvalho, 2006). One indication that FOS-ERP seems to be another situation where technology has outstripped the conceptual hawsers, is the fact that, according to Kim and Boldyreff (Kim & Boldyreff, 2005), "by September 2005 only one paper about Open Source ERP (Smets-Solanes & De Carvalho, 2003) has been published in the whole of ACM and IEEE Computer Society journals and proceedings, whereas more numerous articles have been published in non-academic industrial trade magazines." Although nowadays more research

work has been done on FOS-ERP, this subject is still a new one, with many topics to be explored and tendencies to be confirmed, since the number of adopters and the operation times are still small in relation to the P-ERP figures. In fact, FOS-ERP is a barely explored research subject. As said before, the first academic paper on this specific subject was Smets-Solanes & De Carvalho (2003); the first paper on evaluating FOS-ERP is De Carvalho (2006); and the first international event on FOS-ERP was held in Vienna, Austria, also in 2006[2]. These facts show how FOS-ERP is a young research area, with relatively very little academic effort put on it until now.

However, some good work on related topics can be found. Currently the most in-depth analysis of the economic impact of Free/Open Source Software (FOSS) in enterprise systems was the one conducted by Dreiling and colleagues (Dreiling, Klaus, Rosemann & Wyssusek, 2005). The authors argue that "standards that supposedly open development by ensuring interoperability tend to be interpreted by enterprise systems global players according to their interest". The authors follow this reasoning showing the deeper consequences of this: "[global players interests] might be incongruent with the interests of the software industry at large, those of users organizations, and may also have effects on local and national economies." And more: "despite control of interfaces and standards by few software developers, even integration of the information infrastructure of one single company with one brand of enterprise system cannot be consolidated over time [citing many other authors]." On the open standards subject, they conclude, "software engineering principles and open standards are necessary but not sufficient condition for enterprise software development becoming less constrained by the politics of global players, responsive to user interests, and for ensuring a healthy software industry that can cater for regional market."

On the innovation side, Dreiling and colleagues state that many economists agree to the point of

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