Chapter 1

Evaluating an ISD Methodology for Software Packages

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The Software Package Development Methodology (SPDM) is a methodology for developing complex and customizable software packages supporting business processes, especially Enterprise Resource Planning (ERP) software. Two approaches are applied by this chapter. First SPDM will be compared to a method engineering framework. Method engineering is a discipline to construct new methods from parts of existing methods taking into account situational factors. The second approach is the analysis of the results of a questionnaire, asking users of SPDM their opinion on several issues concerning problems and quality of SPDM. The conclusions, after applying both approaches, are quite similar and some recommendations are made for future research.

INTRODUCTION

As competition in the software market increases, the quality of the software becomes increasingly important. One important factor in the quality of the software is the development method used. The evaluated method is called the Software Package Development Method (SPDM). Currently the considered Software Package Manufacturing Company (SPMC) is working on a new version of the SPDM (SPMC and SPDM are not the real names). To be able to improve something its strengths and weaknesses must be found.
The design documents are an important part of SPDM. These standards can be divided in Definition Study, Functional Design and Technical Design. The goal of the research described in this paper is to find the strengths and weaknesses of the design standards in SPDM.

In this research, two methods are used to get information on the strengths and weaknesses of the existing design standards. The first method is a comparison with design methodology. In this comparison, the design standards are compared to a framework of Method Engineering (Van Slooten, 1993). This framework prescribes the aspects that may be covered by a method. Comparing the design standards in SPDM with this framework should therefore lead to an indication of the quality and completeness of the standards. The concept Method Engineering was introduced by Kumar and Welke (1992) under the name Methodology Engineering. Harmsen, Brinkkemper and Oei (1994) used the term Situational Method Engineering to emphasize the situation-specific character of the process. Van Slooten (1995, 1996) has written that organizations have to change their systems development methods due to changing situations and introduces Situated Method Engineering.

The second method used is a questionnaire that was sent to 120 users of the design standards in SPDM. In this questionnaire, the users are asked for their experiences with the design standards. This should also lead to an indication of the quality and completeness of the standards.

This chapter is structured as follows. The next chapter will contain a short description of the current situation within SPMC and the current SPDM including the design standards. In the third chapter, the design standards will be compared to a Method Engineering framework. The fourth chapter contains the results of the questionnaire. The final chapter will contain the conclusions of this research and some recommendations for SPMC.

PROBLEM SITUATION

SPMC

The information in this paragraph is based on internal documents of SPMC. SPMC is a software package development company. The development of SPMC packages takes place in SPMC Development departments. SPMC Development departments can be found in several countries.

The culture of an organization determines the way the organization functions. SPMC does not have a very deep-rooted culture. This can be explained by the fact that SPMC is a relatively young organization and the high growth-rate of SPMC. The most important cultural aims of SPMC are Initiative, Innovation and Integrity (three times I). Criticism on each others work is accepted and stimulated.
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