Chapter IV

Upfront Corrective Maintenance at the Front-End Support Level

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ABSTRACT

This chapter presents the process of upfront corrective maintenance at the front-end support level. The chapter is logically divided into two parts. The first part introduces the domain of the upfront corrective maintenance process, and presents its current status practised in the industry. It first describes the process, places it within a global virtual IT enterprise and explains its role within the enterprise. It then puts the process in the context of a total front-end support process, the process performing a multitude of diverse types of support activities. Finally, it lists the problems encountered by the front-support organisations today. The second part provides a glimpse into Corrective Maintenance Maturity Model (CM³): Upfront Maintenance, a process model specialised in upfront corrective maintenance. It describes its process phases, maturity levels, and collaboration with the CM³: Problem Management model, a problem management process model at the back-end support level. The goal of this chapter is to provide a detailed insight of the process of upfront corrective maintenance.

INTRODUCTION

Recently, one has realised that the value of the IT (Information Technology) business does not only lie in the products it offers, but also in the needs it serves (Kalakota, 2001; Nelson, 2002). Service quality has become a critical survivability factor.
More and more customers require that the IT companies continuously improve the overall quality of the service they provide. They count service as a key reason for doing business.

With the shared objective of pleasing customers and providing high quality service, the collaborating IT companies organise themselves into so-called virtual IT enterprises, acting as single confluent units handling both B2B\(^1\) and B2C\(^2\) operations. By integrating their processes and applications, they strive to achieve a global inter-organisational co-operation, which in turn would help them to provide their customers with timely, seamless and effective supports on a specific software product or a group of products.

The \textit{CM}^3 \textit{Organisational Roadmap} in Figure 1 depicts the most common constellation of the virtual IT enterprises. This constellation encompasses three groups of organisational levels: (1) customer, (2) front-end support, and (3) back-end support. These three levels play different roles within the enterprise. The customer uses software products and states new requirements for evolving and maintaining them. The front-end support assists the customer in the daily operation of the software products (Kriegsman et al., 1993; Niessink, 2000). The back-end support evolves and maintains the products according to the requirements as requested by the customer.

The front-end support organisations play an important role within corrective maintenance. They receive reports on different types of software problems from customers, transfer them on to the back-end support, and deliver problem solutions from the
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