

Chapter VI

Knowledge-Based Recommender Technologies Supporting the Interactive Selling of Financial Services

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ABSTRACT

Selling financial services requires deep knowledge about the product domain as well as about potential wishes and needs of customers. In this context, sales representatives can differ significantly in their expertise and level of sales knowledge. Therefore, financial service providers ask for tools supporting sales representatives in the dialog with the customer. In this chapter we present the knowledge-based recommender environment KOB4MS (Knowledge-based Advisors for Marketing and Sales) which allows a flexible mapping of product, marketing, and sales knowledge to the representation of a recommender knowledge base. In KOB4MS, we integrate diagnosis, personalization, and knowledge acquisition techniques, thus providing an infrastructure for the interactive selling of financial services.

INTRODUCTION

Due to a restricted knowledge about product assortments and sales processes, sales representatives in the financial services domain are often overwhelmed and prefer a product-oriented advisory approach leading to low quality results for

the customer (Eckert-Niemeyer, 2000; Felfernig & Kiener, 2005a; Keltner & Finegold, 1996). In this context, financial service providers ask for tools supporting sales representatives in the dialog with the customer. Such tools should provide adaptive interfaces (Ardissono, Felfernig, Friedrich, Jannach, Petrone, Schaefer, & Zanker, 2003),

personalized product recommendations fitting to the customer's goals, needs, and wishes, with explanations increasing the customer's confidence in a recommended product (Jiang, Wang, & Benbasat, 2005; Wind, 2001). Koba4MS¹ is designed for the development of such knowledge-based recommender applications (advisors) (Burke, 2000; Felfernig, 2005b). Koba4MS technologies have been successfully applied within the scope of industrial projects. A couple of applications has been implemented for financial service providers supporting the interactive selling of financial services which cover areas of interest such as financing, investment, pension, or insurances. In this context, Koba4MS technologies are used for the following purposes:

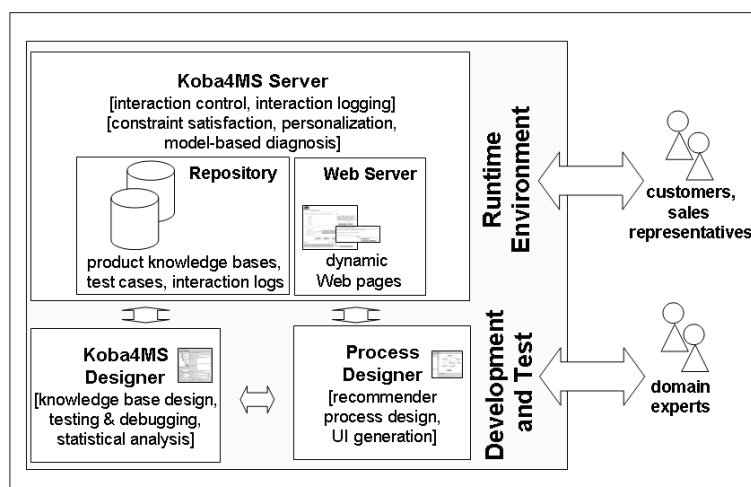
- Formalization of product, marketing, and sales knowledge, that is, implementing a recommender knowledge base (product properties, customer properties, and constraints) and a corresponding recommender process (which questions should be posed to a customer in which situation);
- Test and debugging of recommender knowledge bases, that is, validating the results/solutions calculated by the recommender

knowledge base and (if needed) automatically identifying faulty constraints in the knowledge base;

- Consistency check of customer requirements and (if needed) supporting the calculation of repair actions (minimal changes to a given set of customer requirements); for example, high return rates are incompatible with a low willingness to take risks; therefore, these requirements have to be changed (repaired) in order to enable the recommender application to find a solution; and
- Explanation of the calculated results in order to increase a customer's confidence in a presented solution; in order to be helpful for customers, recommender applications must provide explanations why a certain product fits to the wishes and needs of a customer (Jiang et al., 2005).

This chapter is organized as follows: In Section 2 (Koba4MS Overview), we present the Koba4MS architecture. In Section 3 (Koba4MS Technologies), we discuss Koba4MS recommender technologies and give examples for their usage in the financial services domain. In Section 4 (Experiences from Projects), we report experi-

Figure 1. Koba4MS architecture



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