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Chapter III

The CAME Environment's Basic Component Services

In Chapter 2 an object model-based concept, the service object for the specification of basic services of a CAME environment, is given. The focus of this chapter is to identify the composition of such an environment. The basic service objects and relevant service object primitives of a service-based model of a CAME environment is presented in this chapter by mapping the services and primitives to an example problem domain. This example problem is used to formulate a generic architectural representation for a CAME service description of an information modeling support environment. Such a representation should be capable of providing a flexible and extendable mechanism for information systems design processes. An informal description of the basic CAME service framework is presented in the remainder of the chapter.

CASE STUDY: THE FLOWER AUCTION

The problem domain example concerns a cooperative auction of ornamental products. The flower auction is a flower and plant growers' cooperative organization, which auctions cut flowers and plants. The objective of this particular auction is to sell products at the lowest possible cost to the sellers, to the buyers that offer most profit. Each member-grower is a shareholder of the auction cooperative.

The main activity of the cooperative auction is to sell ornamental plants called products, produced by the growers to buyers. The products are cut flowers or potted plants. Before the auction starts between six and seven a.m., the flowers and plants are inspected for their quality and assortment. The products are supplied to the auction

at the end of the afternoon after harvesting, during the evening hours, or in the early morning. After arrival, flowers and plants are stored temporarily in delivery halls. For cut flowers these halls are cold storage rooms or refrigerated areas; for pot plants these halls can be heated. The consignment note of the grower is brought to the auction together with the trolley. After auctioning, the products are distributed to the customers. Auctioning and distribution is generally done in the course of the morning, because if this is not done quickly enough, it is very difficult for the traders to process and transport these products on the same day. This may lead to a one-day delay in products appearing on the market. At large auctions both flowers and plants are auctioned every working day.

Business Concerns

At the moment the flower auction has a reasonable market share which is growing satisfactorily. The board of directors and the management consider their long-term interests to be: consolidating the position of the auction and improving, through streamlining its core task, i.e., a sales process, which would further improve the speed of logistics and reduce internal costs.

Information technology is regarded as one of the essential factors of the change process. Within the organization the department of information and management is responsible for the development, exploitation, and maintenance of information systems. At the time of the problem evaluation, there were a number of simple, isolated information systems which were badly, or not at all coordinated, and management, together with sector management, decided to study the possibility of setting up a new automated information system. This was necessary because a number of existing systems had reached their maximum capacity, and given the isolation of the current systems, the change would be quite feasible, as only parts of the system would be replaced. Furthermore, management wanted to focus on areas which had been neglected. The following section gives a brief summary of some of the problem areas that were identified to give an idea of the degree of complexity involved.

Commercial Affairs Sector Problems

The main task of the commercial affairs sector is to sell products, and the remaining tasks consist of creating the right conditions, in direct relation to the main task. This includes control of the quality and