5 Systems for the Support of the Company Management

5.1 Problem Situation

One factor that particularly affects the competitiveness of a retailing company in the market is the availability of current management-relevant information supported by an adequate information and communications infrastructure. Information is a critical success factor, and, nowadays, business success results primarily from an information lead over the competitors. Executives need precise information from all areas of the company and from its environment. The large volume of operative data in retail information systems can not be considered as suitable as basis for making management decisions without sensible conditioning and possibly coupling of these data with information from external sources. Managers must be able to recognize any problem areas and to analyze their creation as fast as possible through the availability of meaningful key figures. The same key figures should be used for the support planning. Special management support systems (MSS) are needed here.

MSS are information and communications systems to support management. Their functionality is oriented towards the specific requirements of their users. MSS form a relatively independent subsystem as part of the information and communications system of a company. They provide computer services with which the manager is supported individually in his own organizational limits. He uses the computer service to improve the effectiveness and efficiency in performing his tasks (Frackmann 1996). MSS are innovative applications for modern information and communications technologies that are more similar to the nerve system in a living organism than to a conventional operative application system. They are used for the information supply (summarization, selection, linkage and presentation of management-relevant information), the decision support (application of
methods and models for analyzes, forecasts and planning), the communications support (integration of electronic media) and the development or verification of the "internal model" of the user, namely, they support his learning process.

Specific characteristics of management support systems are:

- the automated consolidating of data from various internal and external information sources
- a data base separated from the operative application with the capability of fast and flexible access
- freely-selectable data selection and summarization; individual specification of information filters (exception reporting)
- a range of methods and functions for analyses, forecasts and planning, including early-recognition functionality, oriented towards the requirements of management
- a graphically oriented user interface; intuitive use; context-sensitive help
- simple change and extension capabilities.

Nowadays, MSS are normally realized using the data warehouse concept. A data warehouse is generally understood to be a company-wide data base for all forms of management support systems. The term was formed by Immon (1992). The basic idea of this concept is that the data are available to the user as in a warehouse. The user can retrieve and analyze these data using simple means. The characteristics of this concept are (Mucksch, et al. 1997):

- The data warehouse is supplied with data using defined interfaces in specific time intervals from the operative applications and from external sources. The import component used here also performs any required transformations, such as selection, aggregation, grouping or key conversion.
- The operative systems are strictly separated from the data warehouse.
- The data are stored user-oriented in the data warehouse, i.e., arranged according to functional areas / topics.
- The data relate to a specific period or time; they are provided with a so-called "time-stamp".
- The data warehouse is fully integrated (semantics: designations, definitions etc.; logical: data formats).
- Characteristic is the non-volatility: no further changes are made to the data in the data warehouse.
- A meta-information system is used for the description and administration of the data in the data warehouse.