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Söhnke M. Bartram

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Telefon: 02407 / 95 96 - 0 • Telefax: 02407 / 95 96 - 9
Internet: www.shaker.de • eMail: info@shaker.de

1 Introduction

The advancement of computer technology seems to be unstoppable. More sophisticated developments of new hardware and software systems are presented at shorter and shorter intervals. Simultaneously, the importance and impact of computer applications for organizations has risen tremendously. Thus, a corporation's efficient usage of computer technology has become a measure of its competitive edge. In order to stay abreast with competitors, many companies and organizations strategically incorporate the use of computer systems on a corporate or operational level. Apart from the large variety of hardware and software systems that are available, two main setups can be distinguished: *centralized systems* and *distributed systems*.[1]

The objective of this paper is to characterize these two system configurations, before indicating and evaluating factors that are important in their comparison. An overall management perspective is adopted as a basis for the following assessments. Finally, two cases will be used to illustrate the implementation of both system setups.

2 System Characteristics

2.1 Centralized Systems

Before comparing *centralized* and *distributed systems*, it is necessary to define and explain these terms. However, it is assumed that the reader is already broadly familiar with both concepts. Therefore, the descriptions will be rather brief and intended for clarification purposes. A *centralized system* consists of one host connected to several terminals or workstations, which depend on the host for data and information exchange (Exhibit 1). This configuration is also called a mainframe system. The host contains the central database that serves all connected terminals.

For a centralized system, the reliability of the network is crucial. Its architecture will ideally be set up in the star topology, where all terminals have direct access to the resources.

A centralized setup facilitates data administration since it is possible to manage the entire system from one office or department within the organization.

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