The Design of Computer-Integrated Manufacturing Systems

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Abstract

Computer-integrated manufacturing (CIM) offers a number of useful and potential opportunities for improving the system performance of the manufacturing firm. However, it has been reported that there is always difficulty while implementing CIM due to lack of integration between various functional areas of manufacturing such as sales, research and development, design and engineering, production planning and control, distribution in terms of both material and information flows. This may be due to the design problems of CIM. Realizing the importance of CIM both from the investment and operational efficiency points of view, an attempt has been made in this paper to investigate the design and implementation issues of CIM. The purpose of this paper is to:

(i) review the design and implementation approaches from a strategic poin of view,
(ii) identify the gap between theory and practice in the design and implementation approaches of CIM,
(iii) suggest a suitable framework for the design and implementation of CIM with a view to improve productivity and quality, and
(iv) suggest future research directions in the development of CIM.

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