

<<企业与信息系统建模分析>>

图书基本信息

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前言

The past three decades have witnessed great achievements in many enterprises since the promotion of enterprise integration centering on the Computer Integrated Manufacturing (CIM) among industries. In China, a new term enterprise informationization has evolved to express the application of information technology and information systems to realize integration and attain improvement in the performance of an enterprise. More and more enterprises benefit from informationization. However, not all of them can materialize their expected improvements. The reason can be manifold. Besides, the social impact and the decision-making problem from enterprise management, the lack of proper and effective analysis methods and tools of integration proves to be a major cause. Enterprise integration relates to both enterprise management technology and information technology, dealing with complex management and technological problems. The realization of enterprise integration through information system implementation involves different levels of an enterprise and different professions. It demands cooperation of all staff in order to achieve success. Unfortunately, due to their distinct professional backgrounds and respective limitation in knowledge, staff engaged in the task very often have different interpretation of concepts and data, which may accordingly create misunderstandings in cooperation and lead to various problems during the process of system construction. In many cases these kinds of problems can be fatal. The modeling and analysis of an enterprise and information system adopts standardized syntax and semantics, through the method of simplification, decomposition and normalization. It realizes the description of an enterprise and information system, and provides a framework of the solution to relevant problems in the design, development, implementation, operation, and maintenance of complex enterprises and information systems. It can not only enhance the cooperative capacity of the team but also greatly decrease the time and cost of the design and development of a system.

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内容概要

Modeling and Analysis of Enterprise and Information Systems From Requirements to Realization discusses the basic principles of enterprise architecture and enterprise modeling. After an introduction to the field the General Enterprise Modeling Architecture is presented. The new architecture includes a set of models and methods. It describes different aspects of the system and covers its life cycle. Its models are structuralized models with multi-layers and multi-views. They are descriptions and cognitions of the system at the top level and provide tools and methodology to understand, design, develop and implement the system. This book is intended for researchers and graduate students in the field of industrial engineering, management engineering and information engineering. Enterprise Models discussed in this book provide a rich source in enterprise diagnosis, business process reengineering and information system implementation.

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插图：The connection relationship is also named as parent-child relationship. It is an association between entities in which each instance of the parent entity is associated with zero, one, or more instances of the child entity, and each instance of the child entity is associated with zero or one instance of the parent entity. For instance, a connection relationship would exist between the entities SUPERVISOR and STUDENT, if a supervisor can guide zero, one, or more students and each student can be guided by zero or one supervisor. A specific instance of the relationship associates specific instances of the entities. For instance, "Qing Li is the supervisor of Cheng Wang" is an instance of the relationship. The connection relationship may be further defined by specifying the cardinality of the relationship. Within IDEF1X, the following relationship cardinalities can be expressed from the viewpoint of the parent entity.

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